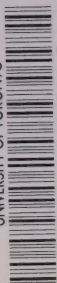


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Photo by Dr. Kenneth M. Johnson, Winnipeg, Ma

Moonlight on Lake Shuswap, British Columbia

"Let me tonight look back across the span
'Twixt dawn and dark, and to my conscience say—
Because of some good act to beast or man,
The world is better that I lived to-day."





T. H. JOHNS, D.D.S.
Victoria, British Columbia

President of the B.C. Dental Association,
Past President Victoria Dental Society.

Born in Victoria.

Dental education at North Pacific,
University of Southern California
and McGill University.

Graduated from McGill 1925 (Stevenson
Medal)

Practised in Victoria since 1925.

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RECENT DEVELOPMENTS IN THE CONTROL OF DENTAL CARIES

by BASIL G. BIBBY

Tufts College Dental School, Boston, Massachusetts

DENTAL CARIES, like other diseases, is the result of the attacking or disease-producing forces becoming stronger than the resisting forces of the tissues. It is obvious, therefore, that the activity of dental decay may be limited either by weakening the force of the caries attack or strengthening the power of the tooth, or more especially the dental enamel, to resist any given attack. In this consideration of the recent progress that has been made towards the control of dental caries, the evidence regarding factors influencing the attacking and resisting forces will be examined separately. Theoretical considerations or laboratory evidence unsupported by animal studies or clinical studies on human subjects will not be taken under review.

I. Weakening the Attacking Forces

It is probable that there are a number of attacking forces which can contribute to destruction of the teeth. As far as the enamel is concerned, one of these, the decalcifying effects of organic acids formed on the tooth surface, has attracted most attention and recently has been the area in which most of the better scientific work has been concentrated. Some attention has been paid the possible proteolytic destruction of the organic component of

enamel, but as yet the principal work^{1,2} including the author's³, on this phase of enamel destruction has been scientifically superficial and does not merit further discussion here. While it is not within the scope of this paper to evaluate the relative importance of decalcifying and proteolytic processes, the reasons why attention has been concentrated on consideration of enamel decalcification are worth reiterating. In the first place the enamel is approximately 98% inorganic material, which is a calcium phosphate in the form of hydroxy-apatite. In the second place science knows of no way of destroying such calcified material of the sort that exists in the mouth except by the action of acids, and as yet has not been demonstrated either in the mouth or in the laboratory that it can be destroyed by any other process. Thus we are left with the action of acid as the only way to explain on acceptable theoretical grounds how the calcified tissue of the tooth can be removed. It is no wonder, therefore, that those trained in exact research methods have concentrated their studies in this area.

Several approaches have been made to the problem of reducing the decalcifying forces which might come to bear on the enamel. All are based on

the idea that if acid is formed in the mouth as a result of the action of bacteria on carbohydrates, tooth decalcification could be prevented by interfering with this process. In recent years a variety of attempts have been made to prevent dental caries in man or animals by interfering with acid formation in the mouth. Those which have attracted most attention are discussed under the following headings.

REDUCTION OF BACTERIAL CONTENT OF THE MOUTH

If bacteria could be eliminated from the mouth, it is obvious that no acid would be formed by bacterial fermentation of carbohydrates. The hope of accomplishing this end by killing off the oral bacteria with antiseptics has long since been abandoned, and it is some years since the attempts to reduce the numbers of specific organisms such as lactobacilli by using agents like metaphen were abandoned.

Recently new possibilities of controlling the bacterial flora of the mouth have appeared. These result from the synthesis of new types of antibacterial agents such as the quaternary ammonium compounds and the development of antibiotics such as penicillin. Of the synthetic antibacterial agents, zephiran has received most attention. Both in the test tube and on the teeth⁷ this agent has shown itself to be a more powerful inhibitor of acid formation by mouth bacteria than previously-used agents. Its prolonged effect in the mouth is particularly noteworthy. On the basis of these findings Stephan and Miller⁸ used a zephiran-containing dentifrice in a number of caries-susceptible patients. After using this dentifrice for a period of approximately 2 years, they observed a reduction in the activity of dental caries as compared with those using a control paste. The significance of this work is reduced by the fact that the experimental group of patients had a higher caries experience at the beginning of the study

than did the controls, and it is partly invalidated by failure of others⁹ to obtain any caries reduction in a similar study.

The greatest possibility of significantly influencing the oral flora seems to rest in the use of the antibiotics, particularly penicillin. Not only does penicillin have the capacity to reduce bacterial population of the mouth for long periods of time even when used in very high dilutions,⁷ but it also seems to have an even more marked effect in inhibiting carbohydrate fermentation by salivary bacteria. Three reports^{8, 9, 10} have already shown that dental caries can be almost completely prevented in animals by brushing their teeth with solutions of penicillin or by incorporating penicillin in their drinking water. This does not mean that it will be practicable, except under special circumstances, to use penicillin dentifrices to control caries in man. The findings do have great importance, however, because of the light they cast on the role of bacteria in the causation of caries. As far as we know, penicillin affects no biological processes in the animal system and yet, apparently by virtue of its specific antibacterial activity, it essentially eliminates dental caries in animals. This effect offers almost uncontrovertible evidence that bacteria are important in the causation of dental decay.

INACTIVATION OF ENZYMES

Even though it might prove impossible to eliminate bacteria from the mouth and thereby prevent carbohydrate fermentation and acid production, it is theoretically possible to accomplish the same end by inactivating certain bacterial enzymes and thereby preventing acid formation without in any way changing the number of bacteria in the mouth. The well-known effect of fluorides in preventing the fermentation of carbohydrates without preventing bacterial growth¹¹ is an example of such an effect. Iodoacetic acid, certain amino acids, some

quinones (vitamin K etc.), and a variety of other agents have similar effects on carbohydrate fermentation.

The first experiments to demonstrate whether such enzyme inhibitors would reduce dental caries were carried out by Miller¹² who fed iodoacetic acid to one group of rats and sodium fluoride to another group in conjunction with a caries-producing diet. The occurrence of caries in both groups of animals was greatly reduced below that in the control group which did not have the benefit of the enzyme inhibitors. Unfortunately, iodoacetic acid is highly toxic and, therefore, has no practical application to the control of caries in man. The enzyme-inhibiting effect of fluorine is almost certainly the less important of the ways in which it acts to reduce dental caries, and it would be misleading to discuss the well-known caries-preventing effect of fluorine under this heading. It will be considered elsewhere.

Vitamin K, which is one of a group of quinones which inhibit fermentation, has theoretical possibilities for the control of dental caries. It has been shown that when small amounts of this material are added to human saliva, the salivary bacteria produce reduced amounts of acid from carbohydrates^{13,14}. On the basis of this finding vitamin K incorporated in chewing gum has been administered to human study groups to determine whether it would reduce the activity of dental caries. Burrell et al¹⁴ claim to have shown a significant reduction in dental caries by this means. Unfortunately, their conclusions can be objected to for several theoretical and clinical reasons, the most important of which is that, except for a marked increase of caries in two of 55 control subjects, there is no essential difference between the experimental and control groups. In our opinion there is as yet no satisfactory evidence to show that the administration of vitamin K will reduce caries activity. Simi-

larly, the possibility of reducing caries activity by the use of amino acids, or fatty acids, lacks substantiation.

NEUTRALIZATION OF BACTERIAL ACIDS IN THE MOUTH

Even should acid formation in the mouth continue in spite of the use of antibacterial agents or enzyme inhibitors, there is still the possibility that their decalcifying effect on the teeth may be avoided by neutralizing these acids before they produce their harmful effects. In keeping with this idea, Grove and Grove¹⁵ have claimed that ammonia in the saliva has such a neutralizing effect that the amount of the salivary ammonia is one of the principal differences between caries-free and caries-susceptible patients. Kesel et al¹⁶ have suggested that a substance such as dibasic ammonium phosphate, which will break down in the presence of saliva to liberate ammonia, will serve as an effective agent for neutralizing bacterial acids, and, therefore, will help to control dental decay. Since this theory is based on somewhat superficial bacteriological studies and has not yet been tested clinically, it need not be taken seriously at this time. Stephan¹⁷ has offered better evidence in this area. He has shown that urea will break down in the mouth to liberate ammonia and has tested⁵ over the period of almost 2 years, the effect of using a urea-containing toothpaste on dental caries. He reported that the use of this dentifrice produced a reduction of caries in a small group of experimental subjects. Unfortunately, the significance of Stephan's findings are largely negated by the failure of others⁶ to find a reduced caries activity in a similar study.

REDUCTION OF CARBOHYDRATE CONSUMPTION

Since oral bacteria must have a carbohydrate substrate if they are to produce acid, it is apparent that if all other methods fail, acid production in

the mouth can be prevented by keeping the mouth free from fermentable carbohydrates. If no carbohydrates are allowed to come into the mouth, no carbohydrate fermentation can occur there, and no acid will be formed to decalcify the teeth. However, this is a purely abstract possibility, not only because mixed mouth organisms rapidly ferment almost any type of carbohydrate, but also because it is not practical to try to eliminate fermentable carbohydrates from our modern diet. The "seductive poisons" condemned by Pierre Fauchard 200 years ago still delight us, and since his day the destructive effects of such foodstuffs have been increased by further refinement and cheaper and wider distribution. Technicological and promotional developments in the food industries have made it progressively more difficult to avoid commercial products and standardized eating habits. If it were possible to eliminate carbohydrates from the diet, dental caries would probably be eliminated. However, it is not possible to do that, and probably it is unwise to try. If the problem is going to be attacked from the carbohydrate angle, it is obvious that we have to make a practical approach. It so happens that basic laboratory studies have given us a lead in this direction.

It appears that the effect of oral bacteria in breaking down sugar or starch is a very rapid one. Either in tooth plaques¹⁸ or in salivary debris¹⁹ an acidity sufficiently high to decalcify the enamel is reached within a few minutes after these carbohydrates come in contact with bacteria or bacterial plaques. Apparently this reaction is so strong that within the period of an hour practically all of the carbohydrate is utilized, and the acid formed is either removed by the saliva or destroyed by further bacterial action. Since active tooth decalcification occurs actively only at acidities below pH 5, the amount of tooth substance going into solution will depend

upon the period of time during which such acidities are maintained on the tooth surface. It is quite apparent that if carbohydrates are in the mouth only once or twice a day, there will be only one or two periods of an hour or less during which the decalcifying processes will be taking place; on the other hand, if carbohydrates are consumed ten times in a day, there will be ten periods of approximately an hour during which destructive conditions will be present on the tooth. What this really means is that if a person eats only a few times each day, there will be only a few periods during which he will be placing his teeth in danger. If, however, he eats many times each day, there will be many such unsafe periods. On theoretical grounds, therefore, if the frequency of eating is reduced, the activity of dental caries should be reduced. There is adequate clinical evidence to support this idea. Not only is it obvious if one considers one's own dental patients, but it is also apparent if the eating habits of native and other groups with low caries susceptibility are compared with those of peoples with high caries susceptibility²⁰. In addition this thesis is supported by a good epidemiological study²¹. This showed that in the soldiers inducted into the army in the Boston area dental caries activity was progressively greater the more frequently these men were in the habit of eating.

ELIMINATION OF CARBOHYDRATES FROM THE MOUTH

Not only is there hope of reducing dental caries by reducing the frequency of eating, there are also other possibilities in this area. There are differences in the rates at which different carbohydrates, the carbohydrates in different foodstuff mixtures, or carbohydrates taken in different forms are eliminated from the mouth²². This suggests possibilities in the selection of foodstuffs which have not yet been explored. The relatively

brief period of acid formation in the mouth following eating suggests the desirability of removing carbohydrate residues from about the teeth as quickly as possible following meals or snacks. This indicates the desirability of applying oral hygiene immediately after eating carbohydrate foods either by brushing the teeth in the approved manner, by eating some detergent food, or if these are not possible, by merely resorting to washing the mouth out with the liquid of one's choice.

II. Strengthening the Resistance of the Teeth

The resistance of the teeth to caries can conveniently be considered to fall into two general categories. One is the possible active resistance of the tooth, that is the ability of the tooth to react to destructive forces as do other tissues by means of inflammatory or cellular response. The other is the passive resistance of the tooth which depends upon the inherent indestructibility of the tissues and not upon any tissue reaction. These will be discussed separately below.

ACTIVE RESISTANCE

Whether the active resistance of the tooth plays any part in limiting the progress of caries has long been a matter of doubt. Because there are no gross changes in shape or colour of the sort that are seen when other tissues are responding to injury, it is easy to believe that the active resistance of the tooth is of a low order. On the other hand, reports of the reduction of dental caries resulting from the administration of vitamins or fluorides seem to suggest that the resistance of the teeth can be influenced in the same way as that of other tissues.

Recently the utilization of radio-active isotopes in dental research has made it possible to measure for the first time the actual amount of an element such as phosphorus or fluorine, which passes into the enamel or

dentine. It has now been demonstrated²³ that radio-active phosphorus enters the enamel in only about a fifth of the quantity that it does the dentine, and that the dentine in turn receives only about a tenth of the amount which reaches the alveolar bone. Of the amount which does reach the enamel²⁴, the greater part seems to be concentrated in the outer third of the enamel where it is apparently acquired from the saliva. Since essentially none of the phosphorus is found in the middle third of the enamel, it seems apparent that there is no significant passage of fluids through the enamel. This makes it fairly obvious that at least as far as the enamel is concerned, its resistance must be of the passive rather than the active sort. In the dentine, where a larger amount of radio-active isotopes pass, we can postulate an active resistance or reaction approximately one-fifth as efficient as that of the bone. Although this is a reaction of rather a low order, it is probably sufficient to determine, under certain circumstances, whether a carious lesion will expand or be limited to its existing size. It is because of this slow exchange of minerals in the dentine that the evidence is so indefinite regarding the control of caries by use of nutritional supplements such as vitamin D. Thus it is that in erupted teeth 'sclerosis' of the dentine or the formation of secondary dentine must be regarded as the only active defensive reaction of the tooth. Whether the efficiency of these reactions is influenced by the adequacy of the nutrition and the general health of the system has not been established. In view of the foregoing, it would seem that the active resistance of the enamel is unimportant in caries control, but that in the dentine systemic influences may manifest themselves as an active response of the tooth against caries, which may influence slightly the progress of dental decay.

PASSIVE RESISTANCE

Under the head of passive resistance we can consider the adequacy of the structure of the tooth both in respect to the proportion and arrangements of the organic and inorganic elements and also in respect to the chemical nature of the constituent molecules.

It is established beyond any reasonable doubt that nutritional factors, particularly the adequacy of the vitamin D supply, are largely responsible for determining whether teeth will be well formed or poorly formed in respect to surface and internal structure^{25, 26}. Mellanby²⁷ claims that this defective tooth formation ("Microscopic Hypoplasia") determines the susceptibility of the teeth to dental caries. I²⁸ have been able to confirm Mellanby's finding that the activity of dental caries is influenced by the nature of the tooth structure. It seems that those teeth with lower grades of microscopic hypoplasia are less susceptible to caries than those with higher grades of this condition. However, I do not believe, as Mellanby has insisted, that susceptibility to dental decay is determined principally by the degree of microscopic hypoplasia in the teeth. It is interesting to note that in their latest paper the Mellanby group²⁴ has finally come to admit that other factors may play a part. Actually our knowledge of tooth formation is as yet most imperfect, and there are undoubtedly many factors besides nutritional adequacy as we now understand it, which are responsible for predetermining the ability of the teeth to withstand decay. These factors will influence not only the morphological structure but also the chemical form of the constituent tissues.

In the last analysis the ability of any substance to withstand chemical change is determined by the nature of its basic units or molecules and the arrangement of these molecules in the structural framework. It happens

that our knowledge of these matters in the tooth is fuller than in any other part of the body. When calcium phosphate is formed at a pH such as exists in the human body, it forms complex molecules having an apatite structure. This happens wherever calcification takes place in the body. Under normal circumstances this apatite is a hydroxy apatite³⁰. If a little fluorine is present, when such apatites are forming, fluorine ions will take the place of the hydroxy ions in the apatite crystal lattice. It has long been known to agriculturists that such fluor-apatites are much more resistant to the action of organic acids than are hydroxy or carbonate apatites. It seems likely, therefore, that if a little fluorine could be built into the tooth structure, we would have a tooth which would be more resistant to the acid and, if acid plays a part in the causation of caries, more resistant to dental caries. While it has not been definitely proven, it is likely that this is what happens in those areas where fluorine is found in the water supply in association with a reduction in the occurrence of dental decay.

It is interesting to note that hydroxy-apatite, which composes the inorganic material of the tooth, reacts very readily with fluorine, and that if enamel or dentine is immersed in a fluorine-containing solution such as sodium fluoride, a reaction occurs (probably the changing of the hydroxy-apatite to fluor-apatite) which greatly increases their resistance to the action of acid³¹. This suggests that tooth decay could be slowed down by treating erupted teeth with fluoride-containing solutions. This possibility has been put to clinical test³² and subsequently confirmed by no fewer than four separate groups of experimenters^{33, 34, 35, 36}. In all instances where children's teeth have been treated, reductions of dental caries of from 30 to 50 per cent have resulted. As yet we do not know the most effective way of giving topical treatments with fluorides and many more lengthy experiments will have to

be run before we can reach a conclusion on this point. At present it seems that, providing we treat young teeth and providing these teeth are cleaned and dried before fluoride solutions are applied, such treatments add to the passive resistance of the tooth to dental decay.

Before summarizing the foregoing observations, it is interesting to note that the activities of dental caries resulting from fluoride treatments are of importance not only because of what they may of themselves contribute to the reduction of dental caries, but also because of the light they cast on the nature of the caries process. Because fluorine, which reduces tooth solubility in acids, reduces dental caries, we have evidence that the action of acid is important in causing dental caries. This information complements nicely the evidence that acid production, which was inhibited by the action of penicillin on bacteria, is also an essential process in dental caries. Having thus strengthened the premise that dental caries is in a large measure the result of tooth decalcification by bacterial acids formed by the action of oral bacteria on carbohydrates, we can with more certainty draw the following conclusions.

III. Conclusions

As yet there is no satisfactory evidence to show that the activity of dental caries can be reduced in man by the use of antibacterial agents, by the use of enzyme inhibitors such as vitamin K, or by the use of agents such as urea or dibasic ammonium phosphate which will neutralize acids formed in the mouth.

The effect of penicillin in reducing bacterial activity in the human mouth and in preventing dental caries in animals suggests that this agent may be of potential value in controlling human decay. The finding also indicates the importance of bacterial activity in the causation of dental decay.

It is not practical to try to reduce dental caries by eliminating or drastically reducing carbohydrate con-

sumption. There is, however, adequate reason to believe that caries activity can be retarded by reducing the frequency of eating. How far the selection of carbohydrate foodstuffs or the rapid elimination of food from the mouth can achieve the same end has yet to be established.

The teeth have a very limited capacity to resist dental caries attack by means of an active or vital reaction. Probably only in the formation of sclerotic and secondary dentine is such a systemic defense against caries important.

The occurrence of dental caries is largely regulated by the ability of the tooth, particularly the enamel, to withstand passively the attacking forces of dental caries. The passive resistance of the tooth is apparently determined in part by the structural perfection of the tooth resulting from the adequacy of nutrition during the period of tooth formation and partly by the chemical resistance of the tooth substance which is influenced, among other things, by the presence of trace elements, such as fluorine, during tooth formation and for some years after the teeth erupt into the mouth.

BIBLIOGRAPHY

1. Gottlieb, B., *Journ. Dent. Res.*, 1944, 23; 379.
2. PinCUS, P., *Brit. Dent. Journ.*, 1935, 59; 372.
3. Bibby, B. G., *Journ. Dent. Res.*, 1932, 11; 99.
4. Stephan, R. M. & Miller, B. F., *Journ. Dent. Res.*, 1943, 22; 53.
5. Stephan, R. M. & Miller, B. F., *Proc. Soc. Exp. Biol. Med.*, 1944, 55; 101.
6. Anon., *Bull. U. S. Army Med. Dept.*, 1946, 5; 265.
7. Zander, H., *Personal Communication*.
8. McClure, F. J. & Hewitt, W. L., *Journ. Dent. Res.*, 1946, 25; 441.
9. Zander, H., & Bibby, B. G., *Proc. Internat. Assoc. Dent. Res., Journ. Dent. Res.*, 1947 (In Press).
10. Hill, T. J., *Proc. Internat. Assoc. Dent. Res., Journ. Dent. Res.*, 1947 (In Press).
11. Bibby, B. G., & Van Kesteren, Mary, *Journ. Dent. Res.*, 1947, 40; 391.
12. Miller, B. F., *Proc. Soc. Exp. Biol. Med.*, 1938, 39; 389.
13. Fosdick, L. S., Fancher, O. E., & Calandra, J. C., *Science*, 1942, 96; 45.
14. Burrell, D. Y., Calandra, J. C., Tilden, E. B., & Fosdick, L. S., *Journ. Dent. Res.*, 1945, 24; 273.
15. Grove, C. J., & Grove, C. T., *J.A.D.A.*, 1935, 22; 247.
16. Kesel, R. G., O'Donnell, J. F., Kirch, E. R., & Wach, E. C., *J.A.D.A.*, 1946, 33; 695.

17. Stephan, R. M., *Journ. Dent. Res.*, 1943, 22; 63.
18. Stephan, R. M., *J.A.D.A.*, 1940, 27; 718.
19. Volker, J. F., & Pinkerton, D., *Journ. Dent. Res.*, 1946, 25; 172 (Abst.).
20. Bibby, B. G., *J.A.D.A.*, 1935, 22; 222.
21. Hyde, R. W., *New Eng. Journ. Med.*, 1944, 230; 506.
22. Volker, J. F., & Pinkerton, D. M., *Journ. Dent. Res.*, 1945, 24; 203.
23. Volker, J. F., & Sognnaes, R. F., *Journ. Dent. Res.*, 1941, 20; 471.
24. Volker, J. F., & Sognnaes, R. F., *Journ. Dent. Res.*, 1940, 19; 292. (Abst.).
25. Mellanby, May, *Med. Res. Council, Sp. Rep.*, No. 153, London, 1930.
26. Sheldon, M., Bibby, B. G., & Bales, M.S., *Journ. Dent. Res.*, 1945, 24; 109.
27. Mellanby, May, *Med. Res. Council, Sp. Rep.*, No. 191, London, 1934.
28. Bibby, B. G., *Journ. Dent. Res.*, 1943, 22; 218.
29. Coumoulos, M., & Mellanby, M., *Brit. Med. Journ.*, 1947, No. 4508; 751.
30. Thewlis, J. T., *Med. Res. Council, Sp. Rep.*, No. 238, London, 1940.
31. Volker, J. F., *Proc. Soc. Exp. Biol. Med.*, 1939, 42; 725.
32. Bibby, B. G., *Tufts Dental Outlook*, 1942, 15; 4. *J.A.D.A.*, 1944, 31; 317.
33. Cheyne, V. D., *J.A.D.A.*, 1942, 29; 804.
34. Knutson & Armstrong, W. D., *Pub. Health Repts.*, 1943, 58; 1701.
35. Fulton, J. T., & Tracy, E. T., *Conn. Health Bulletin*, 1945, 60; 55.
36. Jordan, W. A., Wood, O. B., Allison, J. A., & Irwin, V. D., *J.A.D.A.*, 1946, 33; 1385.

ANNOUNCEMENTS

Université de Montréal—Faculty of Dental Surgery

POSTGRADUATE COURSES 1947-1948

The Faculty of Dental Surgery of the Université de Montréal, with the aid of a grant from the W. K. Kellogg Foundation, is resuming its postgraduate courses for the 1947-1948 session and cordially invites all practitioners to take advantage of them. The following is the schedule:—

ORAL SURGERY:—

Course of one complete week: April 19 to 24, 1948.

Two-week courses, 3 days a week: February 9, 10, 12, 17, 18, 19, and March 8, 9, 11, 16, 17, 18, 1948.

ENDODONTIA:—

Three-week courses, one day a week: February 24, March 2, 9, and April 6, 13, 20, 1948.

Courses of a complete week: Jan. 19 to 24, and May 3 to 8, 1948.

PROSTHODONTIA:—

Courses of a complete week: Feb. 9 to 14, and April 5 to 10, 1948.

Two-week courses, mornings only: Feb. 23 to March 6, and April 12 to 24, 1948.

District of Columbia Dental Society

This Society is presenting its Annual Post-Graduate Clinic on March 14 to 18, 1948 in the world famous Shoreham Hotel in Washington.

Outstanding essayists, topic discussions, registered clinics and plenty of entertainment are only a few of the things planned for this meeting.

Cincinnati Dental Society

The Cincinnati Dental Society March Clinic Meeting and Children's Dental Health Day will be held in the Netherland Plaza Hotel, March 14-16.

FIXED BRIDGEWORK*

by H. D. GRUBB, Cleveland, Ohio

IN discussing fixed bridgework no attempt will be made to enlarge upon so-called "correct procedures," but rather to report upon certain procedures which in my own experience have been found satisfactory and stable. This, after all, is the only thing of value any practitioner can bring to the family Round Table.

Since every mouth presents its own peculiar set of health conditions and since these conditions are interpreted by every operator from the background of his own particular training and experience, it seems unwise, to say the least, to lay down any hard-and-fast rules as to what is desirable or undesirable in any one type of restorative work. There is no desire to condemn absolutely any one of the various types of removable or fixed bridges which have been evolved to meet special needs. Merely I would say that, in my experience, the fixed bridge, where indicated and where properly constructed, has been found the most successful, not only from the viewpoint of health and natural function but from the viewpoint of beauty and lasting qualities. The fixed bridge is the easiest to care for, comes nearer satisfying the patient's pride and peace of mind, and seems more nearly a part of his natural make-up than any removable appliance.

Certain essentials for success in the fixed bridge, however, are unquestionably demanded. One of these is a favourable occlusion; another is well-designed and accurately made attachments for abutment teeth. For this reason, I give special attention here to these requisites, although I am not unmindful of other important factors in the planning and completion of the bridge.

OCCUSION

We know that disharmony of occlusion produces periodontal lesions. Disregard of this fact explains many failures of both fixed and removable bridges. Interference of the cusps, broad occlusal contacts and the overloading of abutment teeth often subject these teeth to stresses which are beyond the limits of biologic safety. Occlusal disharmony is present, often in the cases requiring replacement of teeth, and such disharmony should be corrected before the bridge is made. Postponing adjustment until after the bridge is in position may result in impairment of the bridge, and may even cause a complete change in design.

PROCEDURE

In approaching the individual case, we line up the work as follows:

- (1) Accurate casts mounted so as to allow for a satisfactory study of existing occlusion.
- (2) A complete x-ray examination.
- (3) Adequate notes of conditions observed in the mouth and the history of the case obtained from the patient.

These are the fundamental steps in gathering the material out of which our recommendation for restoration is made.

Out of this material two groups of cases arise; those favourable to bridge-work and those unfavourable. In one group occlusion is harmonious and efficient or can be made so without excessive destruction of tooth structure. In the other group harmony and restoration can only be established by increasing the maxillomandibular opening and a general reconstructive program.

*Presented at the 23rd Annual Fall Clinic of the Montreal Dental Club, October 23, 1947.

I might add that in the diagnosis which precedes the choice of a plan, of necessity, each operator must be his own judge as to how far dental retrogression must have gone to justify the extreme or generalized plan of reconstruction. And here, as in the actual work, I would urge the wisdom of conservatism. Do not recommend or work toward the extensive plan until you have thoroughly considered every possibility of arriving at health, comfort and correct function for the patient by correcting the existing occlusion and building to the present opening.

ATTACHMENTS

The chief consideration in attachments is regard for the health of the dental pulp. We know that normal pulps decrease in size gradually, and the dentine becomes more consolidated as the age of the human being advances. The response of the dental pulp to irritation may be one of constructive change or one of degeneration.

The essential factors in determining attachments on vital teeth are:

- (1) The size and position of the pulp as revealed by the x-ray;
- (2) the radiolucency of the tooth as indicating its mineralization;
- (3) the health of the pulp and the thickness and calcification of the surrounding dentine as indicated by the response of diagnostic stimuli.

For the purpose of diagnosis I prefer the thermal change induced by a pointed piece of ice. The response of a normal pulp closes immediately upon removal of the stimulus. A delayed but definite response may be expected if the dentine is thick and well calcified.

In my practice I do not hesitate to make the necessary preparations for bridge attachments on vital teeth, whether with or without caries or fillings, if in my judgment the evidence aforementioned, as given by x-ray, etc., seems to assure favourable conditions. Shallow preparations, the

elimination of frictional heat and the proper treatment and protection of the cut dentinal surfaces will reduce the amount of irritation to a point where the chance of pulp degeneration is almost negligible. The cutting of sound tooth structure is limited to the amount required for a proper outline, retention and a resistant form and to permit the placing of attachments from a common direction.

In the matter of structural materials, hard gold alloys are essential to the strength and solidity of a fixed bridge. The rigidity of these alloys is sufficient to maintain the proper relation to the walls of the preparation, and adequate strength is secured without undue thickness in the attachment.

The amount of strength and retention required in an attachment varies under different conditions. The degree of torque and strain to which an attachment will be subjected depends upon the length of the bridge, the mobility of the abutment teeth, the occlusion present and whether or not the broken-stress principle has been employed in the construction of the bridge.

In the accepted types of attachments, retention is obtained by close adaptation to nearly parallel walls, the variation from absolute parallel being sufficient only to permit the withdrawal of the pattern and the subsequent seating of the restoration. Retention is also obtained by grooves, locked grooves and by pins.

POSTERIOR ATTACHMENTS

A high degree of retention is obtained in the slice-lock preparation for molars and bicuspid suggested by Knapp. Since 1927, I have employed this preparation in many cases. The few failures which I have experienced may have been due to the excessive taper or the insufficient length of the locked groove. Knapp advised a relatively shallow occlusal preparation which would permit a longer axial

wall and groove, the axial wall and the locked groove being the important retentive features of the preparation.

My experience with this preparation has been satisfactory, and I prefer it for sound or essentially sound teeth, if the crown of the tooth is of sufficient length and in such a condition as to permit the making of a locked groove in solid dentine not less than two or three millimeters in length, the length required depending upon the amount of torque and strain to which the attachment will be subjected.

The shallow undercut groove in the centre of the approximal surface is in a most favourable position in its relation to the horns of the average pulp. The Knapp slice-lock and the Gillett and Irving channel-slice preparation utilize the same principle of retention. Variations of this principle can be made to meet different conditions. The channel-slice preparation may be employed on surfaces that are not intact if there is a sufficient amount of sound dentine remaining to insure strength in the channelled lateral walls.

It may be necessary to provide additional anchorage, especially in preparations on teeth with crowns which are less than the average in length. Additional anchorage may be obtained by use of pins, by including buccal and lingual grooves in the preparation and by extending the preparation to include the other approximal surface of the tooth. The mesiocluso-distal preparation is definitely indicated if this surface is carious or has been filled.

The making of adequate preparations on bicuspid and molars in which there has been a more extensive loss of tooth structure depends on the ingenuity and skill of the operator in employing the various retentive features in the preparation. The preparation which will provide the required strength and retention may be

one for a full crown, a three-quarter crown or an inlay.

It is essential to extend these preparations over weakened portions of the tooth to prevent subsequent fractures. Approximal margins adjoining the edentulous space are extended to permit the finishing of the periphery of the attachment after the bridge has been placed in position.

ANTERIOR ATTACHMENTS

The three-quarter crown preparation as suggested by Tinker and the pin-ledge preparation as suggested by Burgess, together with their appropriate modifications, are employed for anterior bridges.

In a three-quarter crown preparation, deep grooves are unnecessary. Strength and retention are obtained by adapting hard gold to nearly parallel opposing walls and shallow grooves. A pin at the cervical portion of the lingual surface may be used for additional anchorage.

The ledges for the pinhole openings are made, with sharp angles. As Burgess points out, the formation of ledges throws the occlusal stress on the tooth rather than on the pins, which merely hold the attachment in position.

PATTERNS AND CASTINGS

In our preparation we have incorporated certain mechanical retentive features, the full value of which can only be had by assuring that the completed attachment is an accurate complement to the prepared tooth. Improved wax pattern and castings procedures have contributed much to the success of these items. By the proper application of the available knowledge of the physical properties and behaviour of waxes, investment materials and gold alloys, techniques have been developed by which accurate castings can be made with satisfying regularity.

The shrinkage of wax due to elasti-

city and the shrinkage due to thermal change must both be taken into account in making wax patterns either by direct or indirect method. Firm pressure on the wax confined in a matrix is not sufficient to keep the wax in proper contact with the walls of the prepared cavity or model. Patterns which are accurate in size may be made by employing the principle suggested by Van Horn in describing his wax tray and liquid wax method. In a rebasing technique for making wax patterns the elasticity of the added wax virtually equals the shrinkage due to thermal change.

SUMMARY

As a final word and summarizing my impressions, I might say that to me the chief essentials to satisfactory fixed bridgework seem to be:

A mouth in which either a favourable occlusion is present or conditions favourable to the bringing about of this harmonious state; absolute thoroughness in making x-ray and other diagnostic examinations; and finally the maximum of care and attention to details in making attachments to the abutment teeth. Of these three chief requirements the most important is proper occlusion.

THE MANOIR RICHELIEU

Home of the Convention of Canadian Dentists, June, 1948

In the Laurentian Paradise there is the French-Canadian village of La Malbaie (Murray Bay). A few miles from this village at Pointe-au-Pic, stands the palatial Manoir Richelieu that brings its own enchanting atmosphere. Built into the mountainside, upon a bold cliff overlooking the fifteen mile width of the St. Lawrence River, it fits into its green background harmoniously and with the grace of an Old World manor house lording it over its wide domain.

The cool, grey and ivy-coloured walls that rise in pinnacles of true chateau style are seen afar from the St. Lawrence River.

Here is no hotel in the usual sense, but rather the manor house of some vast private estate. Its sunny bedrooms are replicas of those in a French chateau of the period and contain the finest examples of furniture designed by the artisans of French Canada. Over 2,500 original pictures decorate lounges, corridors and private suites.

This summer colony is unique and probably one of Canada's most exclusive. The Manoir with its surroundings invites you to freedom, good cheer, happiness, and reminds you that you are on the scene of the earliest North American settlement.

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A few miles only from the Manoir a dreamland comes true for fishermen. A string of private lakes, scientifically stocked with fighting speckled trout is awaiting you.

The Canadian Dental Association expects you at the Manoir Richelieu in the midst of these grandeurs of the sea and forest, cooled and perfumed by the pine and balsam of the forest as well as the salty tang of this inland sea.

Why not make your reservation by applying immediately to:

DR. GUSTAVE RATÉE, 140 ST. JOHN ST., QUEBEC CITY

DENTAL AID TO CLAIMANTS UNDER COMPENSATION*

by T. R. MARSHALL, D.D.S., Toronto, Ontario

IN APPROACHING this discussion it is my hope to present some thoughts suggested by observation and experience in assisting to adjust claims for dental aid. Misunderstandings, unfair contentions, lack of co-operation, etc., occur between various interested parties and it is the concern of the compensating commissions supplying dental aid to anticipate such problems and apply remedies to prevent recurrence whenever possible. This is a natural course of procedure which is the ear mark of progress—characteristic of organizations such as the members of your association and it is this dynamic spirit in your member institutions that enables them to present a high plane of service to industrial workmen in communities everywhere.

Perhaps it would be best to begin by reviewing some of those factors which contribute to harmonious operation in administering dental aid and later to deal with some suggestions for further improvements. Of course you will naturally expect me to base my remarks on the set-up and functioning of the Workmen's Compensation Act of Ontario because of my familiarity with its constitution and regulations.

The act is administered by a Board of Commissioners with wide powers and complete authority to determine the necessity for, the character and sufficiency of dental aid, as a result of a given injury and in accordance with the provisions of the act. Decisions are made with a sense of fairness, motivated by justice and the real merits of the case. This has proven to be an excellent type of administration. The Board's decision is final so the claim is adjusted without delay and

without recourse to the courts of law which could involve both increased expense of administration and possible legal abuses that sometimes creep into litigation. For example it has been reported that injured workmen have been influenced to engage legal assistance to press their claim for redress. When this is done it is usually on a high percentage basis of compensation obtained and seldom did the workman really win.

Dental aid should be naturally a part of the medical aid program and administered by a medical aid officer responsible to the Board of Commissioners. This provides an important link for co-operation between dental care and the other health services, medical, nursing, etc., e.g. Jaw fracture cases can present a very complicated problem to the general surgeon who is usually called to attend such injuries. Claimants have applied for dental aid following the healing of jaw fracture injuries, complaining that their jaws would not close properly. The condition sometimes necessitates refracturing the jaw and re-aligning of the segments to obtain better functional occlusion of the teeth. A solution of this problem, to a great extent, is to request the surgeon reporting a jaw fracture to invite a dentist in consultation to assist in treatment of the case. In this way it is hoped to secure the best possible function in mastication by the co-operative effort. The medical aid officer is able to effect this co-operation between the surgeon and the dental surgeon to benefit the claimant and at a reduced cost for both medical and dental care.

This officer, being familiar with

*Read before the International Association of Compensation Commissioners in Convention in Toronto, September 1947.

the regulations and details, is skilled to secure accurate information concerning an injury, from which to determine dental aid responsibility. A suitable printed form should be prepared which a claimant can take to his dentist and on which the dentist reports conditions pertinent to evaluating the claim. This form should be logical, simple and concise yet in enough detail to bring out the information required.

The following information is required:—

1. Age, sex and nature of employment of claimant. Dental care for a young person usually calls for a different type of service than for a parent of that young person. Further a dental restoration for a labourer might well differ from a restoration for a person called upon to meet the public continually. Treatment of every individual cannot be stereotyped because of human factors so it is necessary to know such things as age, sex and occupation to properly appreciate the view point of the examining dentist.
2. Condition of the teeth prior to the accident indicating missing teeth and tooth replacements, etc.
3. The nature of the accident and date of its occurrence, the location and details of the injury indicating the extent of damage sustained.
4. The treatment recommended and described in such detail as the examining dentist would describe it if he were reporting to a professional colleague together with an estimated fee for the complete service.

These details of course are indispensable and must be brought out accurately. I often feel that the average dentist does not realize the purpose of questions asked on the dental form submitted for his report because of his tendency to generalize. The picture may be plain enough to him but the medical aid officer who must give approval of suggested treatment must be able to understand the need for such treatment from the report given.

The dental form also should include regulations and information to guide the examining dentist in the procedure desired by the Compensation Commission, with respect to:

- (a) Permission to perform emergency and palliative treatment.
- (b) X-Ray service necessary for adequate diagnosis.
- (c) A schedule of dental service permitted under dental aid together with fee allowance for each service.

*The form thus completed is then returned to the Medical Aid officer for authority to proceed with suggested services.

As a basis for understanding what benefits might be included in dental aid, it is presumed to apply—

1. Following personal injury involving the teeth or jaws during employment.
2. In case of occupational disease, such as mercury, lead, phosphorus, fluorine or other chemical poisoning or effects of radio active substances, etc., or other occupational disorders affecting the teeth or their supporting structures, the workman is entitled to the same consideration as if he was injured in an accident.
3. Where dental care is necessary as a part of medical treatment to assist an injured workman to recover his health and resume employment. *e.g.*: When accidents occur with persons in debilitated health, perhaps with considerable infection about their teeth, they may be very slow in recovering from the injury. Dental treatment eliminating the disease and restoring proper ability to masticate food is an important supplement to medical care and can do much to hasten recovery.
4. In case removable prosthetic dental appliances are broken in the mouth or rendered unusable by conditions induced by the accident. This is a justifiable benefit even if it does lead to difficulties at times. A dental appliance broken in an accident while being worn in the mouth should certainly be repaired or replaced. An appliance rendered useless through injury to natural teeth to which it is attached or some other condition should also be replaced. A peculiar case presented itself some time ago when a patient wearing complete dentures suffered from a body burn. He lost about 25 pounds weight which he did not regain on recovery. He complained

*See Workmen's Compensation form 8b.

that his dentures became loose and his dentist stated that the loose dentures were due to his loss of weight and his diagnosis was confirmed by the experience of dental specialists in this type of service.

Such is the coverage of dental aid here in Ontario.

In awarding dental aid it is presumed that the general accepted principle adhered to is to restore the workman's injured teeth and jaws to as good dental health and function as he enjoyed before the injury, that is in so far as possible and to maintain within reason the health and usefulness of these restored organs for the life of the claimant.

It is further recognized that these services are to be performed by a regularly qualified dentist of the claimant's own choice after the plan of treatment has been authorized by the Medical Aid Officer and provided of course the dentist agrees to provide a reasonably satisfactory service at a mutually agreed fee.

In the administration of the benefits of dental aid it seems to be a wise policy to endow the Medical Aid Officer with authority to exercise intelligent discretion and leeway in settlement of claims.

e.g. Certain types of dental services are not regularly allowed because of their fragility. A salesman has a front tooth injured in a motor accident while engaged in the duties of his occupation. Appearance is an important asset to salespeople and the dentist consulted recognizes this and recommends a fragile type of crown to restore the tooth to best possible appearance. Favourable consideration should be given in such instances invoking the principle, that dental aid should be provided in keeping with the type, the injured person would normally provide for himself were he paying for the service.

Again certain services are sometimes justifiable requiring better than average skill. A young person has sustained a severe injury to a front tooth

causing it to lose its vitality. The problem presents as to whether this tooth should be removed and replaced by a bridge restoration or the tooth saved by allowing the claimant to attend a dentist especially skilled in caring for this type of root condition which would involve a higher fee. It seems proper in cases where dental specialist services are desirable, even though it involves a higher than the usual allowable fee, that the Medical Aid Officer be empowered to give favourable consideration when circumstances commend it. Both of these illustrate what seems to be a special benefit to the claimant but they also indicate an advantage to the Compensating Commission. Authority vested in the Medical Aid Officer to allow such benefits when the occasion justifies it, both the special service and the increased fee allowance, removes the necessity to list such specific services and fees in the regular schedule of dental aid. If every type of dental aid allowed was so listed it is only natural that every dentist would recommend the best for his patient no matter what the cost of the service. Therefore I believe this method of allowing discretionary powers to the Medical Aid Officer is a benefit to the Compensating Commission as well as to the claimant.

Another situation frequently presents itself when a dental injury occurs in an accident involving a claimant who has a severe condition of tooth destruction due to neglected dental diseases. Naturally the dentist consulted is concerned with the whole health picture of his patient's mouth. Many such people have never sought any professional dental care except perhaps to have a painful tooth removed but now are suddenly conscious they need some dental service—particularly when the dental aid benefit will do it for them. The claimants dentist usually makes a summary report as follows—"The man's teeth are so bad and diseased that they all should be removed and complete

dentures supplied even though only two or three have been injured in the accident." The problem is evident, should the entire claim be allowed? It is my opinion the Medical Aid Officer must exercise judicious discretion in such cases and grant the claimant a generous award, on condition, he himself contributes the balance as a stake in the service. He will be more easily satisfied and more co-operative during and after treatment.

These claims present typical problems to the Medical Aid Officer who is called on to use latitude in his authority to determine fair settlements. However this highly competent officer can not be a superman. Problems are bound to arise where he will need some help and advice. It might be an advantage to retain the services of a regular dental consultant. He would be available to examine claimants, review suggested treatment plans and make reports of his observations and recommendations in an advisory capacity. And in this connection it is rather important that such a consultant should be nominated by the official licensing Dental Board for the area, which would ensure his enjoying its confidence and support and thus the consultant would be respected by his colleagues in the profession at large. Such a consultant is a valuable link between the profession and the Compensating Commission and there are many instances where he can be of service to both parties.

He is always concerned with promoting helpful co-operation conducive to satisfactory service and good relations.

He is familiar with the application of dental aid and is able to assist a colleague in planning treatment for a complicated case within the scope of the benefits provided.

He is able to assist the Medical Aid Officer in securing specially qualified professional care in problem cases.

He is available to give opinion in appraising involved claims and assist

in arranging compromise settlements fair to all parties.

He is available to examine claimants who complain of unsatisfactory treatment and assist in arranging a remedy if necessary.

He is available for confidential consultation by the Medical Aid Officer and conversely being in close touch with his professional colleagues he may bring suggestions and assist in effecting improvement of policy and regulations.

It would seem that the coverage of dental aid coupled with the regulations governing it and the administration of the benefits create or minimize the problems encountered. All difficulties are recognized to centre around three basic factors—

1. Satisfying the claimant.
2. Securing satisfactory professional personnel to perform the service.
3. The cost.

These three factors are intimately interrelated because you do not usually have a satisfied claimant unless you have a suitable professional person to perform the service needed. You will not have the sympathetic respect or the interest of the dentist in performing dental care without fair and adequate remuneration. It follows then that if the Compensating Commission is over zealous in keeping down the cost of dental aid, unsatisfactory service will be a major problem. From a business point of view there is no interest for the better skilled dentist or the best skill of any dentist. It is important that dentists should desire claimants for dental aid as clients for services rather than to be indifferent about their patronage. It is my experience that professional people are very reasonable and fair in their attitude in dealing with these cases but they too must be treated fairly.

There is yet another aspect to a discussion of problems relative to dental aid for claimants under compensation. Experience in assisting to arrange

settlements suggests that Compensation Commissions are greatly interested in the general welfare of their beneficiary clients. Administrators demand good service to ensure satisfaction. They also demand good care to enable the claimant to return to normal employment as soon as possible. However the interest is not entirely altruistic; at least a paramount objective is to settle the claim as quickly as possible and without undue expense. This is strictly good business—a satisfied claim with as little cost as possible and the good will of the claimant.

This good business policy goes farther than seeking a good settlement of a claim. It promotes an interest in accident prevention and first aid facilities for the workmen entitled to compensation, presumably to lower the incidence of risk and minimize complications respectively. These observations coupled with experience in promoting dental health both in private practice and public welfare education leads me to ask "Could something not be done to curb the destructiveness of dental disease and their far reaching systemic effects among the workmen of industry?"

Many industries maintain some type of health service for their employees. In most instances a nurse is employed, usually a physician is retained either regularly or on call when needed, but very rarely is a dentist included in any capacity. In a preliminary progress report of a recent survey in Canada it was found that in over 5,000 industries reporting only 7 dentists were retained in connection with the several health units. Any examination of the oral cavity that was performed was done by the nurse or attending physician. A physician usually looks for badly decayed teeth, pyorrhea and trench mouth on his way back to examine the tonsils. That is fine as far as it goes because if the teeth are bad enough, the patient is sent to his dentist and given care. The unfortunate individuals are those who

perhaps are younger, whose teeth are not yet too severely affected by disease but which are passed by unnoticed by the casual glance of the examining physician. The teeth of such persons are thus condemned to be ravaged by dental diseases because the doctor did not mention any defects.

It is appreciated that Compensation Commissions providing dental aid are concerned with accidents, but is it not so that many difficulties arise in settling claims for dental service when accidents occur involving the teeth and jaws of persons presenting a condition of grossly neglected dental health. I submit, paralleling your interest in safety, as associated with accident prevention and in first aid,—you are also concerned with predisposing and complicating factors which might well involve increased settlements for dental aid.

Without labouring the point too much may I be permitted to point out the recognized approach to removing the hazard of dental disease. It is education, early discovery and early treatment. The nature of dental diseases is a process of insidious progressive destruction of the teeth, crippling masticatory efficiency and creating an environment in and about the teeth that subject the entire human body to attack and invasion by pathogenic organisms. Up to now there is no specific preventive measure to apply except intercepting the progress. This can be implemented best through an:

Increased consciousness of the value of healthy teeth in all classes of people—

Which in turn will raise the standard of dental health above its present status.

It was with a hope of assisting employees and employers in this connection that the Industrial Dental Health Committee of the Canadian Dental Association suggest the following basis for a dental care program—

1. Appointment of a qualified dentist in industrial health service units.
2. (a) To make pre-employment examination of prospective employees including x-rays to aid diagnosis.
- (b) To make regular periodic examination of all employees.
- (c) To give emergency dental treatment of a palliative nature.
- (d) To educate employees in dental health including follow up after examinations to encourage complete and regular dental care.
- (e) Finally to familiarize himself with all processes of the industry concerned and thus be alerted to evidence of pathology caused by such substances as mercury, phosphorus, lead, fluorine, acids, various other chemicals and radio active material etc., and communicate positive findings to medical and safety engineering advisors.

Now it will be noted that actual dental treatment is not included in these suggestions. Several reasons might be cited for this but I shall content myself by mentioning only two:—

1. One dentist occupied in providing dental treatment in a large industry and rendering a complete service to those he attended would benefit a very few employees. If he rendered only a partial service then at best it is just an expedient.
2. One dentist engaged in examining, using x-rays when necessary, advising and educating the employees, could benefit a great number of persons even in a fairly large industry. This service would acquaint each individual of his own dental health and give encouragement when dental disorders are present, to do something about them. You might call this first aid in dental health.

The cost of the dentist's services in both of these instances is the same but

the benefit to the number of people vastly different. In the first instance only a few but in the second case many persons are helped. If an industry wants to go further and subsidize treatment, that is fine, but treatment must be secondary to education which should be directed to creating a desire for natural teeth in health.

I am quite sure someone is ready to ask me "How would the Compensation Commission benefit?" by encouraging the establishment of good dental health and maintaining it? I should like to give at least a partial answer to this question.

1. You minimize the hazard of complications when accidents occur.
e.g. many people harbour considerable infection about their teeth and gums and tolerate it until stricken with an accident or acute illness. This toleration of dental diseases nevertheless silently and insidiously takes its toll by lowering the resistance of the individual and because of this debilitation the recovery period is prolonged. In case of a claimant under compensation this involves prolonged medical treatment and many times includes dental care to restore good dental health. In addition to this, there is always a longer period of compensation before the claimant returns to regular employment.
2. Further, the Compensation Commission would benefit by raising the standard of dental health in another way—You lessen the probable cost of dental aid.
e.g. It is agreed that when a workman receives a dental injury he is entitled to replacements and maintenance of the restoration for the rest of his life.

I can easily visualize a situation where the loss of one tooth, accompanied by neglected dental care would be a source of continual expense to the Compensating Commission.

These illustrations are but an introduction to the economic benefits to be derived from a higher standard of dental health in a society of industrial workers.

At the outset of this discussion I suggested it might be wise to begin by reviewing the various aspects of the dental aid benefit and then perhaps consider improvements to the present program. This I have tried to do using as a basis for my thinking the dental aid benefits of the Workmen's Compensation Act of the province of Ontario. Dental aid applied from a palliative and curative standpoint has done much to relieve unfortunate persons who have suffered injuries to their teeth and jaws through accident. This phase of treatment must continue, it is an excellent benefit to these people, many of whom would be unable to adequately help themselves without hardship.

However, I do believe you cannot be content with well doing but should continue your progress—promotion of first aid and safety measures with respect to the dental health of your

beneficiaries is the next step forward.

I believe it was Oliver Wendell Holmes who said in effect, "You can tell the state of the village by going to the mill. If the mill is busy and grinds well, you will find a prosperous farm community and a happy well fed people."

If you see a man with good strong jaws and healthy, good looking teeth you usually find a strong, healthy, well nourished individual. Encourage then, among the employers in industry, the inclusion of a dentist in connection with all industrial health units—for the purpose of raising the standard of dental health among industrial workers and for the purpose of recognizing incipient dental diseases, eradicating severe manifestations, and prolonging the life of the natural teeth for better mastication for every employee.

This addition to an already fine program of dental aid would do much to minimize problems encountered in the administration and application of the benefit.

62 RICHMOND STREET WEST.
TORONTO.

The child must be educated into a sustained desire to have good dental health and the habits and precautions necessary thereto. Dental care for every child is likely to become a fact when every child is demanding dental care. Thus education and service go hand in hand in creating a desire for sound teeth in the mind of every child in the community. Something must be done for that child in the classroom besides sending him to a dentist and having his teeth put in order. But something must be done that will affect his habits and attitudes toward pain resistance or expense resistance in later life. This is where the properly trained health educator comes in. Their services are invaluable. Their function is to supplement the work of dental health and other personnel—not to compete with any or replace any.

If the child is educated into a sustained desire to have sound teeth and the habits and precautions necessary thereto, and chooses his own dentist there will develop a sense of self reliance and personal responsibility that will fortify him against the neglect of his health after he leaves school.—N. C. KNIGHT, M.D., M.P.H., F.A.P. H.A., in Jour. of Am. D. Hygienists' Assoc.

"What a man does with his hands is secondary. It is what he does with his brain that counts. That is what starts things going, what creates."

"We are here to add whatever we can to, and not to get what we can from, Life."—Sir William Osler.

ANNOUNCEMENT*Canadian Dental Association***REGULATIONS GOVERNING THE AWARD OF STUDENTSHIPS**

1. The Canadian Dental Association through its Research Committee offers "Studentships" to suitable students or graduates who have given distinct evidence of capacity for original research, (or, who have won high distinction in scientific study during their University training), and who desire to prepare themselves further for scientific research by continuing their study in the sciences fundamental to their research fields.

2. They are available on equal terms to men and women, and are awarded to the applicants who are deemed best qualified by the evidence submitted.

3. The age of the applicant and marital status will be important considerations when making an award. Previous training will also be taken into account.

4. Application for a Studentship must be made by the candidate to the Research Committee of the Canadian Dental Association and addressed to this Committee, care of the Secretary, Canadian Dental Association.

5. Application forms are available at the Canadian Dental Association Office on request.

6. An applicant shall submit a transcript of his university record together with a statement from his sponsor who may be the Dean of a Dental School or head of a scientific department within a university, showing that in his estimation, the applicant is worthy of training for scientific dental research.

7. The candidate shall state the institution at which he intends to study and the general line of work to be followed.

8. Applications will be considered at the regular stated meetings of the Research Committee of the Canadian Dental Association in September, January and May.

9. The applicant must state how much financial assistance is required to complete the proposed course of study. Payments will be made on a monthly basis during the period of which a Studentship is held.

10. All apparatus and materials purchased with grants are the property of the Canadian Dental Association, unless otherwise provided for in specific cases.

11. Part-time teaching in a university department or faculty may be considered favorably during the terms of tenure of the Studentship.

12. Interim reports on the student's progress may be requested from the Dean or head of the department in which the student is working. The Canadian Dental Association reserves the right to discontinue the Studentship after reasonable warning is given the student, if progress reports are unsatisfactory. The final report prepared by the student and supported by the Dean or head of the scientific department, indicating in some detail the results accomplished in the study, must be submitted to complete the tenure of the Studentship.

Address all communications to:

THE SECRETARY, Canadian Dental Association,
211 Huron St., Toronto, Ont.

"Human nature will not change. In any future great national trial, compared with the men of this, we shall have as weak and as strong, as silly and as wise, as bad and as good."—Abraham Lincoln.

The Forum

THE MEANING OF A PROFESSION

A Convocation address to the dental students at the University of Michigan,
given by Provost James P. Adams.

Condensed from the Jour. of the Michigan State D. Soc.

I wonder whether you fully realize what it means to belong to a profession, to be a professional man or woman. Unfortunately, this word "profession" is used so freely today to describe all kinds of vocations or pursuits that it has probably lost some of its distinctive meaning. It's a part of your job to see that it retains it.

I like the term "the learned profession." It suggests something distinctive—something set apart, as it were, from other fields of activity. What is that distinction? What do we mean when we use the word "profession"? Well, in the first place, it suggests that the member of a profession professes something—professes the possession of specialized knowledge. He has prepared himself by an educational experience, and because of that he has acquired an understanding. He has not merely learned how to do certain things. He has also learned why—not alone in terms of the superficial reasons which lie close to the surface of observation, but in terms of the deeper reasons which have their basis in a mastery of the fundamental science which underlies the practice of an art. I would suggest, therefore, that you so prepare yourselves for your professional life that you will be justified in professing to know.

May I call your attention to a very important implication which should attach to the term "profession"? I have already suggested that it is used to indicate that one professes that he *knew*. Please note the difference in

tense. No layman would have any particular confidence in a professional man who could only profess that he knew once upon a time. Therefore, if you are to deserve the right to profess your knowledge and on that basis practise your profession through the years, you must continue to extend the boundaries of your understanding and refine the quality of your skill as new scientific data are revealed by research and as new arts are sanctioned by experience. This is an obligation you will owe to your school and to your profession. It is an obligation you will owe to yourself.

Strangely enough, the term "profession" is often set off against the word "amateur." A "professional," so called, pursues a certain course as serious business; an amateur pursues it for the love of it. Well, I am not going to suggest that you be an amateur in your professional performances. Other connotations of the word "amateur" would make that inappropriate. But I shall not hesitate to suggest that you try to find in your professional work the same kind of delight that an amateur finds in his play. Make your professional work something more than a means of livelihood. Try to make it an expression of your own creative genius. Let it be an expression of your own high resolves, an expression of your devotion to a task worthy of your highest powers.

And, finally, I would remind you of one more meaning of the word "profession." At some time, in some way,

the term "profession" came to be especially identified with the idea of service. This is an identification which should be deeply cherished by every member of a real profession. It suggests that a member of a profession serves; that he is imbued with the idea of service; that he is interested in helping people; that he measures his achievement in part by what he has done for mankind and not alone by what he has done for himself.

This is a precious heritage of which you can become a beneficiary, if you make yourselves worthy of it. As you prepare for your profession, hold on to this idea of service. Don't let it dis-

appear as a part of your professional purpose. Prepare to exemplify it in your own professional conduct. It will bring you rich rewards—and they will be rewards of the spirit which rust doth not corrupt and thieves cannot break in and steal.

I cannot do better in conclusion than to leave with you the words of Francis Bacon: "I hold every man a debtor to his profession; from the which as men of course seek to receive countenance and profit, so ought they of duty to endeavour themselves by way of amends to be a help and ornament thereunto."

FIVE CASES OF PRONOUNCED ENAMEL HYPOCALCIFICATION WITHIN THE SAME FAMILY

(Brown Teeth)

by GOSTA GUSTAFSON, L.D.S., GÖTEBORG, Per NYSTROM, L.D.S., and
Em. STELLING, L.D.S., Halmstad, Sweden.

Condensed from Report from the Histological Institute at the University of Lund, Sweden.

In 1934 a 20-year-old girl consulted one of us (Nystrom). She had light sandy hair and a clear light skin against which rows of strongly red-brown teeth with defective surfaces stood out sharply. She wanted to have all her teeth extracted and replaced by dentures. Her darkly stained teeth attracted so much attention wherever she went that she could no longer stand it. She was the eldest of ten siblings, four of whom had exactly similar teeth both as regards colour and defects. Owing to the striking features of the case, attempts were made to examine it in detail. However as it was difficult to interest qualified collaborators these attempts were not carried out. The drinking-water at the farm where she lived was examined with regard to its fluorine content, which was found to be very small and probably without any significance whatsoever. Afterwards one after the other of the siblings with brown teeth had their teeth extracted, too, and at the beginning of 1946 the last of them came to undergo

the same treatment; at this time the present examination was begun.

All the children were born and reared on the same farm. The same well with its chalybeate water had been used the whole time. After lactation they were all given the same kind of food; the diet as such is not remarkable in any way. In all the children with brown teeth the deciduous teeth also were brown. Their mother states, however, that she believes the discolouration did not set in immediately after the eruption of the teeth, nor was the discolouration of the deciduous teeth so marked as in the permanent teeth. None of the four children with brown teeth had any caries until age 20 in spite of the favourable conditions, while the normal children, on the other hand, have had caries to the normal extent.

Possible hereditary anomalies were studied. A macroscopic examination was made. The literature was studied. A chemical analysis was made of the teeth and of the drinking water. A roentgen examination was made of the

cranium. A microscopic examination was made, including an examination of ground sections in white light, polarized light and by dark-field illumination. Hardness measurements were taken by means of a micro-hardness measurer.

CONCLUSIONS

The brown teeth examined display a severe disturbance of the mineralization. The change is due to a gradual reduction of the number of submicroscopic mineral rods occurring in normal enamel during the development of the defect until they finally are lacking altogether.

The organic structure of the prisms is not disturbed, and the defect formation must therefore be characterized as a kind of hypocalcification; it is thus not a hypoplasia.

The disturbance of mineralization takes place in each prism separately, and proceeds gradually within each so-called prism section.

In spite of their very defective mineralization these teeth show no ten-

dency to caries. The caries present had not set in until the patients were in their twenties, and was localized to those surfaces where all the enamel probably had been broken off. The fact that the enamel of these teeth does not display any tendency to caries indicates that the degree of mineralization is in some way related to caries, though probably in so far as a too intensive mineralization might check the passage of nutritive substances within the enamel. This is naturally as yet only to be regarded as a hypothesis.

The cause of the brown colour of these teeth is probably to be found in a secondary impregnation from the outside. It seems rather plausible that the defective enamel, highly stainable in toto, would readily absorb substances from the saliva and from the food.

The present material does not allow of any conclusions as to the heredity of these defects; a comparison with similar cases published by other authors nevertheless indicates that heredity may play a role.

COMPARATIVE HISTOPATHOLOGIC CHANGES IN EXPERIMENTAL DEFICIENCIES OF THE VARIOUS VITAMIN B COMPONENTS

by W. W. Wainwright, D.D.S., M.S., Rochester, N.Y.

Associate Professor of Dental Medicine, University of California.

Condensed from *Am. J. of Ortho. and Oral Surgery*, Oct. 1947.

The lesions of specific B vitamin deficiencies can be so severe as to cause the rapid loss of weight and early death in experimental animals. In contrast to these destructive effects upon animals, vitamin deficiencies in humans are ordinarily thought of as chronic disturbances. Purified diets, composed of known substances such as synthetic vitamins, etc., in which only a single known factor is deficient, will in many instances produce more severe lesions than will a multiple deficiency. The paradental lesions of specific deficiency of niacin and pantothenic acid, under experimental conditions, are especially severe.

At first thought, the B vitamins, of which ten are known and others sus-

pected, are closely associated in their function because of the similarity of a few of their chemical properties. Pantothenic acid deficiency is accompanied by hyperkeratosis, increased desquamation, and later a severe gingival necrosis.

Pyridoxine deficiency in dogs produces certain well-known changes including anaemia. Dental changes include severe calculus formation, large pulp chambers and canals, malformation of roots, lack of apical closure, atrophy of odontoblasts, and a widened dentinoid zone.

The antidermatitis power of the B vitamins is one of their most prominent properties. Thiamine has been found useful in the treatment of sever-

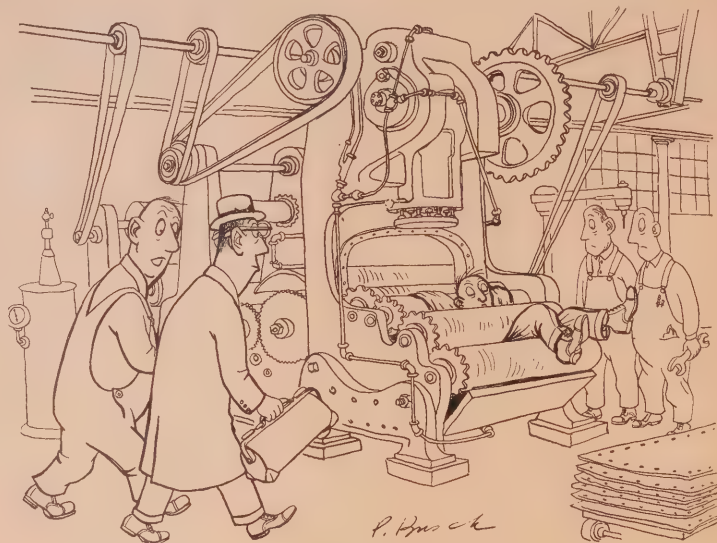
al lesions of the skin and oral mucous membrane.

The possibility of finding symptoms of a single B vitamin deficiency in a patient is quite remote since these vitamins occur together in groups in foods. That this possibility does exist, however, has been pointed out by Nicholls, who recently found graying of hair in refugee children, which was eliminated by improving the diet.

In the case of the B vitamins several factors other than dietary inadequacy must be considered in accounting for a tissue lesion. A prominent factor, for example, in paradental lesions is the chronic use of cathartics. This practice may bring about a deficiency by interfering with intestinal absorption, altering intestinal function, or preventing synthesis of vitamins by intestinal flora.

Any factor which alters the growth or health of epithelium, be it a vitamin, a mineral, or other nutrient, a hormone, a toxin, etc., offers a fertile field for investigation of the aetiological factors in paradental disease. Several factors have been studied and to these has recently been added the large group of antidermatitis factors of the B vitamins. Under experimental conditions, destruction of paradental soft tissues, marginal alveolar atrophy, and severe inflammation result from niacin deficiency. Necrosis of oral epithelium, subsequent destruction of underlying soft tissues, marginal atrophy, and a contrasting lack of inflammatory response is found in pantothenic acid deficiency. Disturbances of dental growth, bone trabecular distribution, and bone marrow result from pyridoxine deficiency.

© Medical Economics



"I hope it ain't anything serious, Doctor!"

CHRONIC ULCERATIVE GINGIVITIS

by FRODE HILMING, Denmark

Summary of paper in Tandlægebladet, Aug., 1947.

Ulcerative gingivitis in the chronic form has been very frequent in Denmark in recent years. In spite of the very few and vague symptoms (patients often feel nothing at all, and dentists often ignore the ailment) chronic ulcerative gingivitis in many cases affects the general health.

An examination of 53 patients with this disease showed that 24 were suffering from heavy lassitude, headache, rheumatic disturbances, depression or irritability, and in all these 24 persons the general symptoms disappeared after treatment of the gum disease.

21 out of the 24 patients had fever of subfebrile character, which ceased during treatment. Further the sedimentation rate was found to be increased in 14 patients, and became normal after treatment.

The remaining patients of the total

number of 53, i.e. those who had no general symptoms, had neither any increase in temperature nor in S.R.

Thus focal infection has been clearly demonstrated in a great percentage of cases of the comparatively pronounced chronic ulcerative gingivitis.

Treatment is often very difficult in these chronic cases of which quite a number seem to remain practically unaffected by our usual methods. In these cases the new Danish organ- or tissue-preparation Eboson (Ferrosan) may do splendid service. Eight to ten intramuscular injections of Eboson in connection with local therapy have been instrumental in effecting a cure in about 90 per cent out of 250 hopeless cases, which had for months previously been treated with all other remedies, penicillin included, without results.

THE FUTURE OF ORAL SURGERY

by Wells A. Daniels, D.M.D., Springfield, Mass.

Excerpt from Jour. of Ortho. & Oral Surg., Nov., 1947.

Present trends in dental education have provoked much thought and speculation as to the ultimate results which may influence the portions of dentistry in which the head and hands must be trained to work together to successfully perform and execute certain operations and techniques. One of these portions of dentistry is oral surgery, that borderline field in which dentistry and medicine are both interested. In fact, there are some members of the medical profession who would like to have medicine take over certain parts of oral surgery. There are also members of the dental profession who are in favour of this movement.

It would seem that a man who has completed a combined and intensified course leading to both the medical and

dental degrees will have a tendency to lean toward the medical side of his training. It is likely that this tendency will develop long before completion of the combined course, due to an environment which is mostly medical in nature. Thus, the technical side of dentistry and the development of manual dexterity would not be considered important by the student.

Some men are of the opinion that graduates of a course of this kind would be well qualified to limit their practice to oral surgery, after they had taken additional training in that particular field. It is only natural that men with this background would tend to plan the operation, keeping in mind the restoration, if needed, which might have a vital influence on the dental and general health of the patient in

the years to follow.

There are many who feel that if some of the present trends in dental education should be seriously considered and put into effect by our universities, they might in time tend to be a major force

in converting certain parts of dentistry into a specialty of medical practice. If oral surgery, excepting certain major operations, is ever transferred to medicine, it will be a fatal step in the division of dentistry.

PREMEDICATION

by Reed O. Dingman, M.D., D.D.S., and James R. Hayward, D.D.S., M.S.,
Ann Arbor, Mich.

From Jour. of A.D.A., Nov. 1, 1947.

Apprehensive, nervous patients may be put at ease and rendered partially insensible to pain by the preoperative use of drugs. Premedication makes many patients receptive to surgical procedures who otherwise might be impossible to approach without general anaesthesia. Premedication with barbiturate derivatives also decreases the incidence and severity of toxic reactions to local anaesthetic agents.

If the procedure is not urgent the apprehensive patient should be given an early morning appointment at a future date. The night before the operation the patient is given pentobarbital sodium grains $1\frac{1}{2}$ by mouth at bedtime. The next morning the patient arrives at the office early, the same dose is given forty-five minutes

before the operation and the patient is permitted to rest quietly until the operation is undertaken.

If the operation must be performed at the date of initial examination, Seconal sodium grains $1\frac{1}{2}$ may be given in the office thirty minutes before the operation. This drug acts more quickly and is more quickly eliminated than pentobarbital sodium.

For the more sturdy patients Nembutal or Seconal grains 3 and morphine grain $\frac{1}{4}$ may be necessary before adequate sedation is obtained.

No premedicated patient should be permitted to travel unattended and under no circumstances should he be allowed to drive a car, because the reflexes are slowed considerably and accidents may result.

PHYSIOLOGICAL CONSIDERATION OF THE RELATIVE SPECIFICITY OF DENTAL CARIES IN MAN

by HARRY JOEL LIPNER, University of Chicago, Chicago, Ill.

Summary of Paper in Jour. of D. Research, Aug. 1947

It is well known that of all animals man is most susceptible to dental caries. It is suggested that this is due to the fact that of all animals, man partakes liberally of sugars and cooked starches; and that he also has the highest ptyalin concentration of all animals. Man is the only animal that partakes of sugars and cooked starches, except when by stealth rats pilfer cooked starches from the larder of man. Normally the rat lives on uncooked starches on which ptyalin has no significant effect. The herbivorous

animals' relative freedom from dental caries may be due to their subsisting on a diet of uncooked starches, and the low concentration or complete lack of ptyalin in their saliva. Available evidence indicates that when cooked starches adhere to the teeth of man they are converted to sugars which by the action of the oral bacteria are ultimately degraded to lactic acid. The combination of acids thus liberated cause an acid decalcification and result in caries.



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Editorial

NINETEEN FORTY-EIGHT

At the time of writing Europe seems to be in almost a state of collapse. One prominent writer states that hunger is making monomaniacs of all Germans with the possible exception of students, that everywhere in Germany the conversation centres on one's daily diet, the latest black-market price of potatoes, how to get one's laundry done, what to do about that last tattered pair of shoes and where to obtain fuel for the winter. The bread ration in France is lower than it ever was under German occupation and many people are cold and hungry. Maladjustments exist in many fields of national economy. The cost of living has risen more than eleven times the pre-war level which is apparent in the faces of the population. In other countries as well, we hear about the shrinkage of the gold reserve while money in circulation has generally increased, industrial production being down, farm yields decreased, railroad systems breaking down and people waiting for the existing regimen to liquidate itself in a spectacular crash. In London, following Napoleon's abdication, for a hundred years up to 1914, could be seen in visible form the wealth of the richest class of the richest period in human history with its array of coroneted carriages and splendour of every type and description. Now this former life and society is dead. Britain, once the most powerful nation on earth, with sea-power, industrial power, financial power supreme and with an Empire covering a quarter of the earth's surface, is now fighting for her existence. Lack of incentive has to some extent, at least, destroyed initiative. Britain is now

staggering under a program which was aimed at extensive social legislation at a time when business recovery should have been given the first priority.

In the face of the general collapse of European culture and its hesitant, lethargic recovery, what about our own country? Of necessity, Canada is deepening her roots in the soil of world affairs. We must face the stern reality that an estimated nineteen million men are still under arms in various sections of the world and that no strong international force has yet been established and so we must govern ourselves accordingly. Business in this country still runs at a high level, however Canada is dependent for her prosperity on export trade and unless new purchasing power is provided in other nations, our export trade will decline. Even if that purchasing power is provided, can the United States and Canada provide the necessary goods without causing a severe local shortage, resulting in a threat of serious inflation, a threat which is plain enough even now? Credit is one thing; the actual goods are something quite different. In August the United States was exporting nearly three times as much as she was importing, consequently, dollar shortage exchange is shrinking in Canada as well as in other countries and is likely to get worse before it gets better. Our reserves are down almost to a quarter of what they were two years ago. Already restrictions have been placed on imports into Canada. We are going to try to do many things for ourselves that heretofore the United States has done for us. From the long term viewpoint, this plan may have merit but right now, we are facing difficult problems which will scale down our standard of living, brought about by rationing, price and wage control, heavy taxation and inflation. We are probably facing a period of lessened production, fewer jobs, scantier goods and still higher prices and here, again, the dentist cannot escape. It becomes increasingly obvious that we must conduct our practices on the highest possible level of efficiency.

Some of these conditions are abundantly clear even now. By October cocoa beans sold on a basis of 900 per cent increase and candy manufacturers are not very happy about the situation. The steel companies and others are becoming fearful that, with such a marked increase in costs, the selling price will reach the point where there will be a falling off of sales, resulting in unemployment and a generally weakening of the business picture which would spell trouble for everyone. In the United States paint and paint materials are up 93%; brick and tile 56%; lumber 188%, and for all materials, 95% over 1939 and 33% since July 1946. In Canada advances have been less but black market prices have shown a similar pattern and quality has deteriorated.

At the time of writing, late in December, there is reported by the Securities Exchange Commission a sharp drop in liquid savings which amounted in 1941 to \$10.6 billion, in 1946 to \$14.5 billion and in the first half of 1947 to \$2.6 billion. Food and clothing are taking a larger percentage of the consumer's dollar, leaving a smaller percentage for other consumer goods.

On the other hand, for the first time in months, the news from Europe is slightly more encouraging from an economic standpoint.

In spite of all these changing conditions, Canada must cling to her ideals of economic and social justice and wage a relentless fight against disease, poverty, unemployment and suffering of every kind, remembering also, that she can never hope to survive as an isolated island in the midst of international distress and poverty. We are in a position to show the world that economic and social justice can best be secured under our system of personal freedom, a freedom which communism denies. The democratic way of life is being challenged and it must be defended and dentistry has a part to play in that defence.

The editor of the *Financial Post* states that Canada is now at a turning point in her national existence and that, as citizens of North America, we wish to live and eat and dress and work and have fun like our fellow citizens south of the border. With such a statement we will all agree. Our problems have become multiplied. We need to multiply intelligence to solve them. There are basic choices to make which cannot help to have a major influence on the practice of dentistry for years to come. For the mass of dentists these problems centre around the building up of the practice, the raising of living standards, the service to mankind, the maintenance of professional stability, so we have a challenging prospect. However as was pointed out, editorially, in this journal a year ago last October, even a small rise in prices can sharply reduce the purchasing power of a large majority of families, that a sharp rise in prices could quickly send most Canadian families out of the market for all but necessities. Even admitting that appreciation of good dental health has increased a great deal, are dental requirements going to receive priority in the minds of the public over automobiles, radios, refrigerators etc.? Are our accounts going to be paid promptly? Are radical changes in dental practice just around the corner? How will Canada's austerity program affect the practice of dentistry? How can the Canadian Dental Association help the average dentist during times of stress? What steps should be taken now to get ready for more difficult times?

Many times in these columns we have referred to the necessity of building up a strong national organization to cope with the increasing number of problems facing our profession, of the need for full-time officers to direct our many efforts, of the necessity to increase our dues that financial requirements might be adequate. In this latter matter, Alberta cut the pattern for the financial set-up of the Canadian Dental Association in deciding that its annual grant to our national association would be on the basis of ten dollars per member. At the November 14 meeting of the Ontario Board a similar resolution was passed which means that over half the dentists of Canada are now paying ten dollars per annum into the treasury of the C.D.A. Is it too much to hope that, faced with this splendid leadership, all of our provinces will take action in 1948 to make this decision unanimous?

M. H. G.

BOOK REVIEW

American Textbook of Operative Dentistry in contributions by eminent authorities. Edited by Arthur B. Gabel, D.D.S., M.A., Edwin T. Darby, Professor of Operative Dentistry, The Thomas W. Evans Museum and Dental Institute, School of Dentistry, University of Pennsylvania. Eighth Edition. Thoroughly revised with 438 illustrations. Published by The Macmillans, St. Martin's House, Toronto, Ontario. Price \$11.00.

This book contains ten chapters as follows:—Examination and Diagnosis by Paul G. Boyle and Kurt H. Thoma; Caries by Philip Jay; Preventive Dentistry by Russell W. Bunting; Mechanics and Operative Procedure by Arthur B. Gabel; Metal Inlays by Edwin S. Smyd; Porcelain Inlays by William D. Vehe; Dentistry for Children by Walter C. McBride; Special Operative Procedures by Thomas J. Hill; Restorative Materials by Floyd A. Peyton. With such a galaxy of talented contributors one needs to say little about the standard of this book. However, this reviewer would like to take exception to one recommendation in the chapter on Oral Prophylaxis and that is to the reference to certain types

of instruments such as the Tompkins scalers, the Younger scalers and even the D. D. Smith's files. In each group certain instruments are properly designed but in each group some instruments are not properly designed. The objection is that the cutting blade or file is not in line with the long axis of the instrument which is most important.

As in the last edition, emphasis has been placed on prevention and the broader health aspect of dentistry. Greater stress, however, has been placed on fundamental mechanical principles as a means to attaining the above objectives. The editor of this book feels that more harm has come to more patients as a result of improperly planned or poorly executed operative procedures than from any lack of the dentist's medical knowledge.

The editor further points out that the text has been planned to present factual and descriptive material and that one of its chief functions is to teach correct modes of thinking.

The book is attractively printed on good paper and contains much valuable information, and should prove definitely helpful to the teacher, the practitioner as well as to the student.

M. H. G.

CANADIAN DENTAL ASSOCIATION NEWS

(FROM THE OFFICE OF THE SECRETARY)

Regulations Respecting United States Exchange

Canadian banks are authorized by the Foreign Exchange Control Board to approve applications from residents of Canada for business travel funds up to U.S. \$150 per applicant per trip without reference to the Board. This authorization includes applications from members of the dental profession who wish to attend professional and scientific meetings where such attendance is for the purpose of securing information which will assist the applicant in his practice. Applications for amounts in excess of the above must be referred to the Board before being approved. The foregoing information was given to all Authorized Dealers by the Foreign Exchange Control Board on November 17, 1947, and the following extracts are taken from their circular letters:

"Authority to Authorized Dealers to approve Form H and sell U.S. funds for business travel without reference to the Board is limited to \$150 per applicant per trip. For a definition of business travel and procedure see Paragraph 6."

Paragraph 6, Section 14, of the Manual of Instructions to Authorized Dealers reads in part as follows:

"An Authorized Dealer may approve a permit on Form H authorizing the export of Canadian and foreign banknotes, coin and travellers' cheques to a total value of \$150 U.S. per applicant per trip, for business travel purposes under the following conditions:

(a) The trip must be one which is necessary for the conduct of the affairs of a Canadian business or profession in which the applicant is regularly engaged. This includes the following:

- (i) Cases where a firm is paying the expenses of a regular employee to attend a convention of a trade or business association related to the business of the firm;
- (ii) Attendance at professional and scientific meetings where such attendance is for the purpose of securing information which will assist the applicant in the practice of his profession;
- (iii) Attendance of accredited delegates at conventions of international trade or labour unions; and
- (iv) Travel on duty by members of the Canadian armed forces;

but does *not* include travel on personal or private business or attendance at service clubs and other similar conventions.

(b) In connection with such an approval, the Authorized Dealer may sell U.S. dollars up to a value not exceeding \$150, less any amount of Canadian banknotes, coin and travellers' cheques the applicant proposes to take out of Canada with him.

(c) Where an application is made by an individual undertaking business travel on behalf of his employer, the application must be approved by the employer, either in the form of an official letter stating the purpose of the journey and the amount required or by the counter-signature of the employer on the Form H which is tendered by the applicant. This requirement may be waived in the case of an applicant whose employer does not maintain an office in the community in which the application is made or where there are other special circumstances which, in the opinion of the Authorized Dealer, make compliance with such requirement impracticable. In the case of an application for travel on duty by a member of the armed forces, evidence confirming the nature of the trip is to be submitted to the Authorized Dealer in the form of a letter from the applicant's commanding officer.

(d) If more than one member of the same family (e.g. husband and wife) apply to travel at the same time for business reasons, the applications must be referred to the Board. (An Authorized Dealer may, however, approve a business application for one member of a family under the conditions of this paragraph and approve an application by an

other member under the conditions stated in Paragraph 7.")

Members of the Association should have no difficulties with respect to their business travel applications. It is understood dentists may go to the United States as many times as they like on the basis of business travel and it will not interfere with their annual quota of U.S. \$150 to which they are entitled for pleasure purposes.

In the interests of all members of the profession, the above quoted regulations should be carefully observed.

The Canadian Officers' Training Corps

Dental undergraduates are eligible for COTC enrolment in the Royal Canadian Dental Corps. Selection is from applicants in the first year of a Dental Faculty who have completed pre-dental training as defined by their respective universities.

R.C.D.C. Officer Cadets undergo Theoretical Training during their first, second and third dental years. Three summer vacation periods are devoted to Practical Training and are divided **into:**

- (a) Two summer periods at the Royal Canadian School of Infantry. The successful completion of these two periods produces a qualification of Lieutenant, RCIC (Reserve Force).
- (b) A third summer period under strictly RCDC auspices which is sub-divided in the following manner:

- (i) Four weeks at the RCDC School in Ottawa.
- (ii) Twelve weeks serving a clinical indentureship in various RCDC clinics across Canada. This latter part of the plan is patterned on the indentureship required by the Faculty of Dentistry of the University of Toronto in lieu of a summer infirmary period. The dental officer will act as preceptor to the officer cadet and will supervise and assist him in his work at the chair.

Successful completion of this third vacation period qualifies the candidate as Lieutenant, RCDC (Active Force), or Captain, RCDC (Reserve Force).

The COTC plan is designed to fill approximately half of present and future officer requirements of the Canadian Army, Active and Reserve Forces. Officer cadets, enrolled in the

COTC, are provided with sound military and professional training of a progressive nature, leading to a commission in the Canadian Army on completion of the programme.

Exemption of Tax on Toothbrushes

In the new tax announcements on November 17 last, under the item toilet brushes, toothbrushes were included. The tax of 25 per cent meant an increase in the price of toothbrushes to the public.

Immediately request was made by the Association that exception be made on this article in the excise tax to be levied on toilet brushes. It was stated that a toothbrush is essential to the health of the individual and further increase in price by the addition of the tax would be detrimental to health. The statement was also made that over 95% of toothbrushes are manufactured in Canada.

The request was acknowledged by the Minister and on December 7 he announced in the Commons that toothbrushes would be exempted from the new tax.

Lateness of Journal

The Committee on Publications regret that the Journal has been received so late for several issues. The situation is entirely beyond the control of the Committee and is apt to continue for some issues.

The facts are that the Printers' Union have made demands which the publishers do not feel can be met. The agreement between the publishers and the union expired on September 30 last. Pending agreement it has been difficult to get printing done. This situation applies to all publishing houses in the area and will undoubtedly be reflected in all publishing houses in Canada.

The costs of publishing are mounting rapidly. Two 20 per cent increases were met by the Association last year and it is most probable that a further increase of a considerable amount will have to be met in the near future.

Since writing the above, a strike of pressmen of over five weeks' duration has been settled, and we hope to return soon to our scheduled publication date. Some publications have cancelled their December issue on account of this strike, but the Committee is anxious to not drop an issue unless it becomes absolutely necessary.

Regulations Under Ontario Dental Technicians Act

Regulations under the Act passed for Dental Technicians in Ontario (1946) have now been assented to by the legislature. Particular attention is directed to Section 3 (2) of the Act which states "All regulations made by the Board shall be submitted to The Royal College of Dental Surgeons not less than thirty days before being submitted to the Lieutenant-Governor. . . ."

Request for Correspondent

European dentists, by their letters express the need of some contact with this continent. They feel that the war years left them depleted of any knowledge of developments in dental science since 1939.

Several of these men have written requesting that they be given the name of some dentist who would be willing to correspond and endeavour has been made to select some Canadian dentist in each case.

Dr. F. Straub, Gevelsberg 1. W. Mittelstrabe 19. is anxious to correspond with a dentist in Canada.

British Columbia Raises C. D. A. Grant

The Registrar for British Columbia has forwarded the following information:

"At a meeting of the council held on the 22nd instant it was agreed to increase the grant of the College to the Canadian Dental Association for the year 1948 to Eight Dollars (\$8.00) in respect of all members of the College practising within the Province, as at January 2nd next."

Note: All provinces have taken action this year in increasing the C.D.A. grant. Seven provinces have agreed to make the grant on a basis of \$8.00 per capita and two at the rate of \$10.00 per capita.

Amendment to Ontario Dentistry Act

A Bill was passed by the Ontario Legislature on October 30 last entitled "An Act to Amend The Dentistry Act."

This amendment gives the Ontario Board permission to proceed in two matters:

- (1) to establish, develop, regulate and control dental hygienists
- (2) to raise the annual fee to a maximum of \$25.00.

Ontario Raises C.D.A. per Capita Grant to \$10.00

At a meeting of the Ontario Board held on November 14 last the following resolution was passed:

"That commencing January 1st, 1948, the annual grant from this Board to the Canadian Dental Association be on a basis of \$10.00 per capita."

H. Baden Powell Appointed Representative for Alberta

At a meeting of the Board of the Alberta Dental Association, Dr. H. Baden Powell of Calgary was appointed representative of the Board to the Board of Governors of the Canadian Dental Association.

Dr. Baden Powell replaces Dr. R. A. Rooney as official representative for Alberta.

NEWS FROM THE PROVINCES

ONTARIO

Toronto Academy Winter Clinic

This annual feature of the Academy has become established as a service not only to Toronto dentists but to their colleagues in many Ontario centres. On November 27 over 500 patronized the splendid program provided, which embraced lecture clinics in a wide variety of subjects. The committee under the chairmanship of Dr. J. H. Johnson, are to be commended for excellent arrangements.

It would appear that this meeting serves many purposes—It affords a good opportunity for becoming familiar with newer developments in dental science which is conducive to good dental practice; it provides scope for progressive dentists to demonstrate ideas they may have developed in the course of study and practice; it provides a time for fellowship and fraternization. All these are excellent principles around which our Winter Clinic programs seem to be built.

The luncheon meeting on this occasion was a respite from dental discussions. Dr. J. D. Robbins from the Department of English, Victoria College was guest speaker and chose as his subject, "The Value of Non Informational Reading". The speaker said there were many reasons why people read but there are two very worthy of consideration before a professional audience. 1. To provide a sort of balance wheel—Most conscientious dentists need a little balancing from purely scientific matters. 2. To gain experience in human relations through reading imaginative creative writings where the artist reveals himself or has a power of insight into real life. The address was most worth while.

The Academy council chose this time to honour another of its members. Dr. Wilbur Amy was presented with a life membership by Dr. S. A. MacGregor, and Mrs. Amy with a bouquet of red roses by Dr. Colton Bliss. Dr. Amy's acceptance of the honour was very characteristic of him. He is a rugged individualist who speaks his mind and does things in his own way. Yet beneath a veneer that appears egotistical but which in reality is superficial, one finds a very kindly man—a man well versed in dental science who as a teacher has contributed much in effort and energy, to raise his fellow dentists to a higher plain of service. Here are a few admonitions he made on this occasion: Are you young men practising dentistry to get all you can out of it or to put all you can, in terms of service, into it? . . . Never be discouraged, there are more ways of doing things than one and sometimes failure can be your greatest success . . . never be jealous of the other fellow's success, you have no time to be jealous. In concluding his remarks he made a plea not to be placed on the shelf now that he was an honorary member. He said, "Remember no shelf will hold me."

It would be difficult to comment adequately and fairly on the many good presentations made during the many sessions. The fact that so many dentists reserve the day, many coming from a distance, would seem to indicate that the program is valuable in contributing to their store of knowledge and experience. The Winter Clinic originally was a sort of demonstration of progressive achievement put on by the members and their guests and this function seems to continue to grow year by year.

Bill—An Act to Amend The Dentistry Act

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. *The Dentistry Act* is amended by adding thereto the following section:

10a. The Board shall have power, subject to the approval of the Lieutenant-Governor in Council, to pass by-laws,—

- (a) providing for the establishment, development, regulation and control of an ancillary body to be known as dental hygienists;
- (b) providing for the delegation to dental hygienists of the performance, under the direct control and supervision of a member of the College, of the services of cleaning and polishing teeth and the giving of instructions and demonstrations in oral hygiene and mouth care;
- (c) prescribing other specific dental duties of a minor nature that may be similarly delegated for performance by dental hygienists;
- (d) regulating the conditions and prescribing the qualifications for admission to such body;
- (e) prescribing the admission and annual fees payable by members of such body; and
- (f) generally for the defining, regulating and controlling of the practice of dental hygiene.

2. Subsection 1 of section 19 of *The Dentistry Act* is amended by striking out the symbol and figures "\$10" in the fifth line and inserting in lieu thereof the symbol and figures "\$25", so that the said subsection shall now read as follows:

- (1) Every member of the College engaged in the practice of dental surgery in Ontario shall, on or before the 1st day of January in each year, pay to the treasurer, or to a person deputed by him to receive the same, such annual registration fee, not exceeding \$25, as may be prescribed by by-law of the Board, and such fee shall be recoverable by suit in the name of the Royal College of

Dental Surgeons of Ontario in the division court of the division in which the member in default resides.

3. Section 20 of *The Dentistry Act*, as amended by section 3 of *The Dentistry Amendment Act*, 1942, is further amended by adding thereto the following subsection:

- (1c) No work, service, advice or assistance that is part of the practice of dental hygiene and that is undertaken, performed or given by any dental hygienist in the office or clinic of a member of the College and under his supervision and control, shall be deemed to be a contravention of this section.

4. The third paragraph of Schedule A to *The Dentistry Act* is amended by inserting after the words "Thunder Bay" in the third line the word "Cochrane", so that the said paragraph shall now read as follows:

Electoral District No. 3 shall consist of the following counties and districts: Algoma, Kenora, Manitoulin, Nipissing, Parry Sound, Rainy River, Sudbury, Thunder Bay, Cochrane and Temiskaming.

5. This Act shall come into force on the day upon which it receives the Royal Assent.

6. This Act may be cited as *The Dentistry Amendment Act*, 1947 (No. 2).

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Regulations Made by the Board Under the Ontario Dental Technicians Act, 1946. Admission and Regulation

1. The following persons shall be entitled to admission as dental technicians to carry on business in Ontario and to registration when so admitted upon payment of the fees herein prescribed:—

- (a) any person who,—
 - (i) was a member of any of His Majesty's Armed Forces during the World War of 1939 to 1945 and who was carrying on the business of a dental technician prior to his enlistment; and
 - (ii) applies for registration before the 31st day of December, 1947, or at any time within eighteen months of his discharge from military service; and

(b) a person who has complied with these regulations for admission.

2. (1) Renewal of registration shall be granted to every person entitled thereto upon payment of the prescribed fee.

(2) A certificate of registration in Form 1 or renewal of registration in Form 2 signed by the chairman and the Secretary-treasurer of the Board shall be issued to persons entitled to registration or renewal.

(3) A certificate of registration or renewal shall expire with the calendar year, but shall be subject to renewal before or after the expiration of the year.

3. An applicant for registration as a dental technician shall make application in Form 3 to the Board and, when required by Form 3, shall furnish,

(a) proof that he is of the full age of twenty-one years;

(b) proof of good moral character;

(c) proof of service within Ontario for a period of at least 4 years with a dental technician or technicians, or a dentist or dentists or both;

(d) proof of having successfully obtained standing at the annual examinations conducted by the Board as herein provided; and

(e) such further information as Form 3 may require.

4. (1) The period of service under clause c of regulation 3 may be served wholly before, partly before and partly after, or wholly after the coming into force of the Act.

(2) The service or part thereof may have been performed without Ontario while the applicant for registration was a member of His Majesty's Armed forces.

(3) The service shall consist of the work of a dental technician.

5. The Board shall appoint a Committee of examiners composed of not less than 2 legally qualified dental technicians and 1 legally qualified dentist who shall have charge of the annual examinations at Toronto of applicants for registration.

6. (1) The annual examinations shall be held in the month of May or June or at such other time as the Board may determine and shall consist of a practical test or tests in the work

ordinarily performed by a dental technician.

(2) There shall be an examination within three months after coming into force of these regulations.

7. (1) The candidate for admission to carry on business as a dental technician, who wishes, after four years of service as set out in regulations 3 and 4, to take the annual examination, shall give to the secretary-treasurer of the Board notice in Form 4 to this effect at least one month before the date of the examination.

(2) The notice shall be accompanied by an examination fee of \$10 payable to the Board

FEES

8. (1) The fee for registration of any person under the Act shall be \$25, payable to the Board.

(2) The fee payable for the annual renewal of registration shall be \$20, payable to the Board.

MEETINGS OF BOARD

9. (1) The chairman shall call and preside at all meetings of the Board, sign the minutes of each meeting when approved by the Board and act generally in accordance with the requirements of his office for the proper carrying out of the duties of the Board.

(2) The chairman may call such meetings of the Board as he may deem expedient and shall call a meeting upon the written request of any two members of the Board.

10. Notice of a meeting of the Board shall be in writing delivered or mailed to each member of the Board not less than one week before the time set for the meeting.

11. In the absence of the chairman and vice-chairman the members present shall elect a chairman of the meeting.

12. Three members of the Board shall constitute a quorum at any meeting of the Board.

13. The secretary-treasurer shall,—

(a) conduct the correspondence of the Board;

(b) keep a true record of all its proceedings;

(c) send notice of meetings to members of the Board;

(d) keep a register of persons admitted to carry on business as dental technicians

and those to whom renewal certificates have been granted together with their addresses and furnish a copy thereof to any member of the Board upon request;

(e) furnish to The Royal College of Dental Surgeons of Ontario,—

(i) annually a complete list of the names and addresses of registered dental technicians; and

(ii) particulars in writing of any changes in the list as the changes occur from time to time;

(f) keep such books of record and account as the Board shall determine and permit any member of the Board to make an inspection thereof at any time;

(g) receive all monies payable to the Board and place them to the credit of the Board in a chartered bank approved by the Board;

(h) keep a record of the results of all examinations; and

(i) under the direction of the Board, take all necessary steps and proceedings to enforce the provisions of the Act and these regulations.

14. On the 1st day of March of each year the secretary-treasurer shall prepare and shall certify an alphabetical list of all dental technicians registered under the Act, together with their business addresses, and he shall forthwith mail a copy thereof to each registered dental technician.

15. There shall be paid by the Board,—

(a) to each member of the Board a fee of \$10 for each day or portion of a day while engaged in attending a meeting of the Board, and his reasonable travelling and hotel expenses;

(b) to any member of the Board or any dental technician appointed to investigate any complaint under clause c of subsection 1 of section 3 of the Act or assist in the conducting of any prosecution, his reasonable travelling and hotel expenses, and such fee as may be reasonable, not exceeding \$50;

(c) to each examiner appointed under regulation 5, a fee of \$15 a day, not exceeding in all \$75 for each examination;

(d) to the secretary-treasurer a sum not exceeding \$1500 per annum (and his reasonable and proper expenses) in payment

of all services rendered or to be rendered under the Act; and

(e) such other reasonable and proper expense as may be incurred with the approval of the Board for the purpose of carrying out the provisions of the Act and these regulations.

DISCIPLINE AND ETHICS

16. No dental technician shall,—

(a) advertise himself as a dental technician by written or any other advertisement otherwise than by,—

(i) mail to the dental profession; or

(ii) advertising in a journal or other publication exclusively devoted to dental surgery or dental technique, or both, or in a printed publication circulated exclusively among dentists or physicians or dental technicians, an announcement or card giving his name, qualifications, address, specialties, if any, business hours and telephone number;

(b) advertise or cause to be advertised the prices or terms of payment for his work or products as a dental technician; except to quote or state, upon request therefore, the prices or terms to any legally qualified medical practitioner, or dentist or dental technician;

(c) use in the manufacture or repair of oral prosthetic devices materials other than those prescribed by the dentist or physician for whom the work is being performed;

(d) directly or indirectly advertise expressly or impliedly that he,—

(i) gives consultations;

(ii) gives free services;

(iii) grants premiums;

(iv) grants rebates, discounts or reductions; or

(v) promises the return or refunding of money paid for services rendered by him as a dental technician;

(e) in any advertising make any mention or claim with respect to the time of service or the speed with which any service is to be rendered; or

(f) carry on the business of dental tech-

nician otherwise than in accordance with the provisions of the Act and of The Dentistry Act. 17. A dental technician who violates any of the provisions of regulation 16 shall be guilty of misconduct within the meaning of the Act. 18. (1) Where the Board receives a complaint in writing that any registered dental technician has been guilty of misconduct or displayed such incompetence as to render it desirable in the public interest that his registration should be cancelled or suspended, the Board may cause an investigation to be made and may fix a time and place at which it shall meet to hear and determine the complaint.

(2) Notice in writing of the hearing shall be given by registered post to the person against whom the complaint has been made by delivering or mailing a copy to that person at least ten days before the hearing and the notice shall be accompanied by a copy of the complaint.

(3) The person against whom the complaint has been made shall be entitled to attend and answer the complaint and to be represented by counsel at the hearing, but where he does not attend the Board may proceed in his absence.

(4) The Board may employ such legal and other assistance as it deems necessary for the purpose of the investigation or hearing. 19. The Board may cancel, or may suspend for such time and upon such terms and conditions as it deems proper, the registration of any person whom upon a hearing it finds to be guilty of misconduct or to have been incompetent.

20. These regulations shall come into force thirty days after the filing thereof.

Honourable Vincent Massey Installed Chancellor of Varsity

On November 21, Canada's wartime High Commissioner to Great Britain was installed as Chancellor of the University of Toronto. It was a very colourful event and witnessed by many prominent people. It was the occasion too when eminent citizens of Canada, Great Britain and United States were awarded honorary degrees. Among those receiving degrees were—Lord Beaverbrook of the London Daily Express and newly appointed Chancellor of the University of New Brunswick; Miss Helen

Rogers of the New York Herald Tribune; Sir Alexander Cadogan, British Representative to the United Nations Security Council; Chief Justice Rinfret of the Supreme Court of Canada; Mr. Harold W. Dodds, President of Princeton University; Mr. Lawrence Hunt, New York; Mgr. Ferdinand Vandry, Laval University and Mr. George McCullagh, Toronto.

Chancellor Massey presented a thought provoking address at convocation according to a report in the Toronto Globe and Mail. He spoke of the University being essentially a community of teachers and students but he suggested there were two "lions in the way", impeding achievement of the University's ideals of teaching and the pursuit of learning. One of these "lions" was the excessive number of students and he was not alluding to the presence of ex-service men as he expected that even when those men and women had graduated, a greater number of students would attend University than before the war. Further, it is often urged that the doors of Universities should be open to all who wish to enter. But if modern democracy is to be well served the education of the future leaders should not be impaired by the presence within a University of those who are not intellectually qualified for its privileges and whose very members only make it impossible for others to receive the attention which their promise deserves.

The other "lion in the way" was, as Mr. Massey termed it "irrelevant expansion" or the assumption by the University of functions alien to it. "It is good for the occupations concerned to have the high standards of a University established in the training for them", he said, "but the essential task of a University is surely to train the mind and not serve as a vocational school". The proper course, he felt, was that vocational teaching should be regarded as an accessory rather than the essential part of a University's task. Such courses should not be given merely as training in technical work but as education in the fundamental principles underlying the work. Mr. Massey saw the supreme value of a University not as training for any occupation or profession but as the cultivation and discipline of the mind given by a liberal education.

Ladies' Auxiliary Meets

The November meeting of The Ladies' Auxiliary to the Academy of Dentistry was held at the King Edward Hotel with the President Mrs. M. G. Boyes presiding. Mrs. F. W. Doan, introduced the guest speaker, Mrs. John Davidson, whose subject was, "An Eye Witness Account of Lake Success." Mrs. Charles McLean expressed the thanks of the Auxiliary to Mrs. Davidson.

The results to date of the campaign to finance a modern dental clinic for The Children's Aid Society were given by the treasurer Mrs. C. I. Treadwell.

University of Toronto, Faculty of Dentistry

Excerpts from Staff Letter, December 1947

REGISTRATION FOR SESSION 1947-1948

The enrolment, though greatly restricted through lack of accommodation, gives evidence of wide distribution, as follows:

British Columbia	25
Alberta	9
Saskatchewan	34
Manitoba	20
Ontario	435
Quebec	1
Nova Scotia	3
New Brunswick	1
United States	3
Australia	20
England	3
Scotland	1
South Africa	2
China	2
New Zealand	1

560

Dr. E. R. Granger of Mt. Vernon, N.Y.

This outstanding practitioner and clinician on occlusal reconstruction visited Toronto on December 7. He lectured in the Faculty to both students, staff, and members of the Toronto Academy. His lectures were very valuable and thought provoking and presented procedures that were not only highly skilled but elucidated very valuable principles.

B. Sc. (Dent.) and M. Sc. (Dent.) Courses

Those enrolled in the B. Sc. (Dent.) course

are Dr. E. J. Doran, Buffalo, N.Y.; Dr. W. L. C. Hsu, China; Dr. Willa Liu, China; and Drs. J. R. Fletcher, R. A. Hugill, and R. W. Marshall, all of Toronto.

Dr. C. H. Moses of Toronto is registered for the M. Sc. (Dent.) course.

Extra Moral Lectures were given at the Ottawa Dental Society by Dr. J. Kreutzer; Grey-Bruce Dufferin Dental Society at Owen Sound by Dr. W. G. McIntosh; Buffalo Dental Society by Dr. P. W. Arkle and Dr. W. G. McIntosh.

Distinguished visitors to this Faculty during November included Dr. J. Axel Hojer, Head of the Government Health Services for Sweden; Dr. Alfonso Leng, Dean of the Dental School and Professor of Periodontology; University of Santiago, Chile; Dr. Emil Schulz, Dental Surgeon, Prague, Czechoslovakia; Dean Bunting, School of Dentistry, University of Michigan; Dean Rochon, School of Dentistry, University of Detroit; Dean Walsh, Faculty of Dentistry, McGill University; Dean Charron, Faculty of Dentistry, University of Montreal.

Class 2T3, Toronto

Every member should plan NOW to attend the Reunion Dinner, marking the 25th Anniversary of our graduation, to be held May 17, at the Royal York Hotel.

JESS FULLERTON

Essex County Dental Association

Over 75 dentists attended the fortieth anniversary of the formation of this Society at the Prince Edward Hotel in Windsor on Dec. 13. President Dr. Roy Perry presided at the meeting when each of the 22 past presidents were presented with a key. Those so honoured were Dr. L. J. Miller, Dr. Arthur Johnston, Dr. E. C. Young, Dr. T. D. Campbell, Dr. L. J. Fenech, Dr. M. G. Brick, Dr. E. F. Jamieson, Dr. R. W. Cunningham, Dr. L. D. Hogan, Dr. F. J. Furlong, Dr. O. C. Baker, Dr. R. R. Hodgins, Dr. A. L. Meredith, Dr. D. Barkoff, Dr. C. C. White, Dr. D. M. McIntyre, Dr. F. J. Stodgell, Dr. R. J. Reid, Dr. Stanley Brown, Dr. H. L. Smith, Dr. T. N. Robinson and Dr. T. E. Armstrong.

Dr. René Rochon, dean of the Faculty of Dentistry, University of Detroit, was the guest speaker of the evening.

Ottawa Dental Society

The program of this active association is well under way for its 1947-48 season. Dr. S. A. MacGregor presented a two day clinic in November arranged by the dental public health Committee of the society in co-operation with the Department of National Health and Welfare. In December Dr. J. Kreutzer, assistant director of the dental clinic, Faculty of Dentistry, Toronto, presented an address entitled, "Dental Caries—Causes and Prevention." On January 12 Dr. O. C. Applegate of Ann Arbor, Michigan, gave an afternoon and evening clinic on partial denture construction.

Program planned for the remainder of the season follows—

February 9—Dr. H. M. Robb, Toronto.

Subject:—*Periodontia*.

March 8—Dr. S. W. Bradley; Dr. B.

Dixon; Dr. I. W. Hamilton.

Subject:—*Orthodontia for the General Practitioner*.

Officers of the society are:—

President.....Dr. Elvin S. Macartney

Past President.....Dr. Paul Côté

Vice President.....Dr. George Barrett

Secretary.....Dr. John French

Executive:—Drs Aimé Coûture, H. G. Hudson, A. C. Stinson, L. E. MacLachlan, J. W. Lawrence, F. G. Gallop, and C. A. Laurin.

QUEBEC

Montreal Dental Club

This club was fortunate in having as its speaker at the November meeting, Dr. Harry Brown of the Department of National Health and Welfare at Ottawa, who took as his subject "Dentistry in Public Health".

In a most enlightening address Dr. Brown outlined the set-up of the Department of Health and Welfare, and explained many of the functions of its various divisions, namely medical, veterinarian, public health nurse, dentist, public health engineer and told of how their work interlocked. The speaker said that the role that dentistry was playing in public health was an ever-increasing one. "More knowledge of dentistry is needed in public health and more knowledge of public health is needed in dentistry," he claimed. He went on to say that prevention was the watchword of the Department of Health, and its chief role was one of education. He urged



DR. E. S. MACARTNEY
President, Ottawa Dental Society

strongly that practising dentists do not miss the golden opportunity that is theirs of education at the dental chair.

Dr. Brown touched on the fact that the Department was keeping a very watchful eye on the present work being done with fluorine. He claimed that a great many misleading statements without foundation of fact had appeared in print. "However, although artificial fluorination is far from being a settled thing at the present time, there is room for a good deal of optimism as to its ultimate value," he said.

Dr. Brown was introduced by Dr. J. W. Abraham and thanked by Dr. Ralph Edmison.

NOVA SCOTIA

Sydney Dental Society

On the occasion of the November meeting of the Sydney Dental Society Dr. George MacLeod, of New Waterford, discussed aspects of D.V.A. in dentistry, and Dr. Fred Forristal on possible uses of Sodium Fluoride.

Visitors included Drs. W. M. Buchanan, and M. R. Jackson of North Sydney, and L. L. Buffett of Glace Bay.

Future meetings will consist for the most part of clinics, for which two members each

month are responsible. At a previous meeting held at the Isle Royal Hotel, and which was much enjoyed, the clinicians were Drs. H. W. Burchell, who has been fifty-two years in practice and who demonstrated the combining of tin foil and gold foil in mal-leted foil fillings, and H. W. Black, who after forty-nine years in practice discussed contemporary dental history, comparing conditions and modes of today, with those he found when beginning his practice.

Halifax Dental Society

At the meeting held on November 27 a request was received for Dr. A. Morton, Medical Health Officer, to appoint a committee to assist the Board of Health on dental matters vital to school dentistry. The committee will consist of the President of the Dental Society and two members and will be called "Advisory Committee on Dental Health".

The guest speaker was Mr. R. A. Hornstein, head of the Dominion Meteorological Bureau in Halifax, who presented a most excellent verbal picture on all phases of weather prediction. Much interesting discussion and question answering followed. A vote of thanks was extended and heartily endorsed by all members.

Halifax Dental Nurses' and Assistants' Association

The first official meeting of this reorganized association was held on October 20, the following officers being elected:

President Mrs. Avis Ritcey
 Vice-President Marita MacDougall
 Corresponding Sec. Katherine Griffin
 Recording Sec. Jean Ferguson
 Treasurer Alice Merry
 Social and Program Committee Bertie Pub-
 licover

Assisting Chris. Cameron, Jessie Russell.
 Welfare and Sick Committee..... Muriel Ra-
 fuse.

Assisting..... Chris. MacGee, Jean Slack.
 Membership Committee..... Mary Christie.
 Assisting..... Judy Cox, Rowena Lockyer.

The President expressed her appreciation, and asked for the co-operation of the officers and members in carrying out their duties, and felt confident that the Halifax Association would erect and maintain the high standard established by other associations across Canada.

BRITISH COLUMBIA

Vancouver and District Dental Society

December meeting: Hotel Vancouver, Tuesday the 2nd.

The Executive of the Society and Dr. Ham Simmons, Chairman of the Committee on Program are to be congratulated on the excellence of the meetings so far. Announcements for future meetings promise that this standard will be maintained which bodes well for future attendance and interest.

The speaker for the evening was F. F. Molt, D.D.S., F.A.C.D., F.I.C.D., F.I.C.A. who spoke at length, and illustrated his talk with slides, on the subject "Some Oral Surgery Problems of the General Practitioner." Dr. Molt's name is well and most favourably known in Oral Surgery circles. He practised for a number of years in Chicago and presently in Seattle.

The Refresher Course on Head and Neck Anatomy and the Course on Pathology conducted by medical men of Vancouver are to start at once.

Elected to membership in the Society were the following: Drs. W. J. Sproule; L. R. Bowlsby; A. Diner; F. M. Hall; F. W. Banford; J. N. Penzer and L. Boom.

ALBERTA

Edmonton Dental Nurses' and Assistants' Association

The following officers were elected at the September meeting of this Association: President, Miss Martha MacAndrew; Vice-President, Miss Louise Mason; Secretary, Miss Doreen Adams; Treasurer, Miss Frances Shaw and Social Conveners, Miss Gladys Rowsell and Miss Lou-Jane Wright.

Dr. P. J. Kendal, President of the Edmonton Dental Society addressed the Association, on the History of the Dental Assistant and her Work in the Office Today.

At the October meeting Miss Lorraine Fletcher spoke on the Classification and Preparation of Cavities.

At this meeting plans for the year were outlined which included the Annual Dance, a number of interesting lectures, a sleigh ride and some form of charitable work.

The Annual Dance was held November 20 in the main dining room of the MacDonald's.

Hotel, with nearly 100 couples attending. Dr. P. J. Kendal and Dr. W. Scott Hamilton were patrons and received with Miss Martha MacAndrew, President of the Association.

Arrangements had been made by the Social Conveners, Miss Lou-Jane Wright and Miss Gladys Rowsell. Miss Jean Campbell was in charge of ticket sales.

At the December Meeting, Dr. W. Rowan, Professor of Zoology, spoke to the girls on "Teeth—Past and Present." His talk was illustrated with specimens of teeth, etc. from his collection which proved very interesting.

DOREEN ADAMS.

Health Department Salaries

Salaries for the three dentists who operate a clinic for treating Calgary's public school pupils under direction of the City Health Department have been set at \$4,000.

Calgary Dental Society

The regular monthly meeting of this Society was held in the Palliser Hotel on December 8, 1947, Dr. Cliff Lowry presiding.

The guest speakers of the evening were Dr. W. E. Addinell, President of the A.D.A., Dr. R. A. Rooney, Secretary-Registrar of the A.D.A. and Mr. Cobbledick legal adviser of the A.D.A.

Dr. W. E. Addinell gave a talk on the old age pensioners' dental scheme as handled by the Alberta Dental Association and what has been accomplished to date. So far this scheme has proved very successful and the wish of the A.D.A. is to be able to extend full dental treatment including all types of dentures.

The meeting wound up with a film in technicolour "Recall your Future" loaned by the Justi Co. This proved to be a very interesting and educational picture.

SASKATCHEWAN

Western Canada Dental Society

Officers of the Western Canada Dental Society elected at the Convention in Banff 1947.

President,—Dr. L. J. D. Faskin, 2216 Angus St., Regina, Sask.

1st Vice-Pres.—Dr. A. R. Hurst, Clement Blk., Brandon, Man.

2nd Vice-Pres.—Dr. John Clay, 901—Southam Bldg., Calgary Alta.

Secretary,—Dr. L. D. Haselton, 808—Canada Bldg., Saskatoon, Sask.

Treasurer,—Dr. A. Singer, Royal Bank Bldg., Saskatoon, Sask.

The next Convention of the Western Canada Dental Society will be held in Saskatoon, June 8th, 9th, 10th and 11th, 1949.

MANITOBA

Winnipeg Dental Nurses' and Assistants' Association

The regular monthly dinner meeting of this Association took place at Moore's Restaurant on December 8, with Miss Ethel Brown, presiding.

Each member was allowed to bring a friend and over fifty were in attendance. After a short business meeting the members and their guests spent a most enjoyable evening in the form of a Christmas party. Miss Marion Smith was the convener.

D. A. MCCULLOCH.

EMPIRE NEWS

NEW ZEALAND

School Dental Service

An indication that the condition of New Zealand school children's teeth had improved tremendously since the introduction of the State School Dental Service in 1921 was given by the President of the New Zealand Dental Association, Mr. W. B. Tennent, at the Association's annual meeting at Auckland. Mr. Tennent said that when the scheme started that ratio of extractions to fillings was 114.5 to 100. Now the ration was 6.3 to 100. At first parents were asked to pay an annual nominal sum for each child, but some years

later the service was made free. The Government had now extended the free service to include children up to 16 years, the intention being to extend it to 19 years as time and personnel allowed. However, there was such a great shortage of dentists in the country, that although the number of dental students had been increasing, and today there were 245 at dental school, it would take 20 or 30 years to bring the numbers of practising dentists to a stage where free dental service could be given to all. — School Dental Service in New Zealand, *British Dental J.* 83:135.—per Public Health Economics.

GENERAL NEWS

It's Not Always Easy

To smile
 To forget
 To forgive
 To apologize
 To be careful
 To keep silent
 To take advice
 To be unselfish
 To be courteous
 To keep out of jail
 To hold your temper
 To profit by mistakes
 To live up to the rules
 To use good judgment
 To admit your mistakes
 To pay your bills promptly
 To shoulder a deserved burden
 BUT IT'S ALWAYS BEST.

Sulphonamides

Recently, the Council on Pharmacy and Chemistry of the American Medical Association voted to delete from the 1947 edition of *New and Nonofficial Remedies* the discussion on the local use of the sulphonamides and to substitute the following statement: "Experience gained in World War II seems to indicate that the use of crystalline sulphonamides as topical agents was not very successful in the management of wound infection or in treatment of infections of the skin or mucous membrane. The routine use of sulphonamides as topical applications in wounds, burns, and in superficial infections is therefore to be discouraged."—From Editorial in *Jour. of A.D.A.*

Preventive Dentistry

"Members of the American Dental Association were told by one of their colleagues August 8 that the profession was 'devoting too much of its time to teaching and practicing better methods of extracting teeth and making artificial dentures and too little of its time teaching and practicing preventive measures.' The charge was made by Dr. Maurice E. Peters of Boston during one of the closing sessions of the eighty-eighth convention. He said: 'Good dentists should treat dental diseases at least two years before

a toothache has occurred. The dental profession already has the knowledge and the ability to prevent much dental disease and to control it so that patients should be able to go through life, from the cradle to the grave, with their own teeth and not be subjected to dentures. Why should people go to dentists for dental care and end up with artificial teeth?'

"Dr. Peters, stressing 'controlled dentistry,' said his theme was saving teeth, 'apparently not a very popular habit in the profession, if the record I read and the patients I see tell the story truthfully. Just because our profession started as a 'pull-em-out' and 'put-em-back' profession,' he went on, 'must we always remain such? We seem to have developed to the stage where the exodontist takes them out and the prosthodontist puts them back, not only decoratively, but quite efficiently and expensively. But is that dentistry? . . . A large number of dental specialists would be eliminated if dentistry were doing its job—saving teeth. But they will remain in business as long as there is more money to be made in artificial dentures than in preventive dentistry.'"

"Preventive Means Urged on Dentists," New York Times per Public Health Economics.

F. D. I. Executive Committee Meets in Brussels

The executive committee which was elected in Boston at the general meeting of the Fédération Dentaire Internationale met in Brussels on October 4 at the Eastman Dispensary.

The organization of the F.D.I. was taken up in detail, and the new statutes and rules will be sent to the affiliated countries as soon as possible. Plans were made for organizing the commissions for the next quinquennial congress and for stimulating the work of these committees and subcommittees.

It was decided to try to hold the 1948 annual meeting in Oslo at a time that would make it possible for visitors to combine attendance at the July meeting of the American Dental Society of Europe in London with attendance at the meeting of the Fédération Dentaire Internationale.

Survey of Dentists in Canada

Ottawa, Nov. 21—Dentists in Canada show a definite preference for practice in the bigger cities, a report released today by Hon. Paul Martin, Minister of National Health and Welfare, reveals. With 39 per cent. of Canadians living in cities of 10,000 or more population, 71 per cent. of the practising dentists were concentrated in these centres.

Part of a national survey undertaken to assemble authentic information regarding future employment possibilities for professionally trained persons in Canada, the report was prepared by the research division of the National Health and Welfare Department, assisted by the Canadian Dental Association.

The estimated future supply of dentists will be "well able" to meet ordinary demands, the report states. During the war an estimated 25 per cent. increase took place in civilian demand for dental services, but as the pre-war demand for dental services came from only about one-quarter of the population, the overall increase in the post-war period is estimated to be about five per cent.

Whether the demand for increased dental services continues, the report notes, depends on future economic conditions and on dental health education.

Sparse service to rural areas is most marked in Manitoba, the report reveals. There 41 per cent. of the total population and 77 per cent. of the dentists are concentrated in the Greater Winnipeg area.

The 67 per cent. concentration of dentists in the Alberta cities as compared with 26 per cent. of the total population is an even greater relative urban concentration of dentists than in Manitoba. The effect on rural areas is, however, alleviated by the geographic spread of the cities.

In Saskatchewan the report says that the problem is one of general lack of dentists rather than a concentration of them in cities.

Population per dentist is relatively low throughout British Columbia and rural areas would therefore appear to be fairly well served, the report states. However, because the population outside the large cities is relatively small and settlements are scattered, the distances to be travelled by the rural population to obtain dental services are great here also.

Of the central and eastern provinces Ontario is most favourably situated with the lowest over-all population-dentist ratio of all the provinces. People in rural sections of the province south of Nipissing and Parry Sound have relatively short distances to travel to obtain dental care, although rural areas in the northern sections of the province are not so well served. Out of 45 counties in southern Ontario 36 have less than 3,000 persons per dentist. The national average is one dentist for 2,674.

An analysis of the Nova Scotia statistics shows that when the survey was prepared, 30 of the 33 dentists of Cape Breton are located in Cape Breton County. The other three are in Inverness. No dentists practise in Victoria and Richmond counties which have a combined population of more than 20,000. On the Nova Scotian mainland, Guysborough County has one dentist for a population of 15,000 and is relatively remote from larger urban centres.

In New Brunswick the statistics show Gloucester and Northumberland with a low proportion of dentists resident. Both are distant from the larger cities.

Of the counties of Quebec south and east of the St. Lawrence and between Levis and Huntingdon, five have no dentists and another seven with a total population of more than 150,000 have only 11 dentists. Counties east of Levis, including the Gaspé peninsula, and the northern sections of the province are sparsely served.

Studies of the number of dentists in cities showed that they tended to avoid suburban areas and cities and towns distant from other large centres of population.

Newburgh Test Shows Caries Reduction

The addition of fluorine to the water supply of Newburgh, N.Y., in an experiment conducted by the State Department of Health, shows a marked decrease in the susceptibility of that city's children to dental caries. Results of the experiment, begun in 1945 and still continuing, are given in Science by Drs. Sidney B. Finn and David B. Ast.

In Newburgh, sodium fluoride was introduced into Washington Lake, the source of the city's water supply, at the rate of one part to one million parts of water. Individual

lactobacillus counts were made on random samples of the Newburgh school population in 1944 and again in 1946 and 1947. Similarly, the Kingston school children were tested in 1946 and 1947.

In Newburgh, at the outset of the experiment, the sampling showed that 63.5 per cent had counts of 20,000 or more and 11.9 per cent were negative. A similar analysis early in 1946, or roughly a year later, showed that the percentage stood at 55.2 and 15.4, respectively.

A sampling this year showed that 47.3 per cent had high counts and 20 per cent registered negatively. Similar tests of children in Kingston over a similar period showed no appreciable change.—*N. Y. Jour. of D.*

School of Nutrition

Savage Hall, new headquarters of Cornell University's School of Nutrition, was dedicated in October at a convocation entitled "Nutrition—A Key to Human Welfare." The new \$500,000 structure, named in honour of the late Elmer Seth Savage, a pioneer in nutrition at Cornell and a member of its faculty for 35 years, was financed by farmers of the Northeast; the equipment was provided by the State of New York.

Preliminary Report Made on Fluoride Study in Ohio

Results of a preliminary analysis of a study made by the U.S. Public Health Service under the direction of the Division of Dental Hygiene, Ohio Department of Health, have been revealed. According to the report, the topical application of a 2 per cent solution of sodium fluoride has reduced the incidence of dental caries by 40 per cent in a group of 5,600 school children in Miami County. The preliminary report is based on the findings at the end of one and a half years after treatment was started.

Children from 6 to 10 years of age were included in the study, each child receiving from two to six applications of the solution. A prophylaxis was given before each application. Best results apparently were obtained by giving four treatments at intervals of four to six weeks. The children will be re-examined from time to time to determine how long the treatment continues to be effective.—*Jour. of A.D.A.*

Dental Health

The following article prepared by the American Dental Association contains a timely message for the dentists of Canada.—Editor.

What are YOU doing for the Dental Health of your Community?

YOU are rendering a fine dental health service to *your* patients. BUT are you satisfied that for every person you render this fine service there are four, five or more persons in your community who may be denied the benefits or even the proper knowledge of the benefits to be derived from such health service?

The answer perhaps is, "No, not satisfied, but what can I do about it?" If you teach your own patients the proper care of their mouths and of their children's mouths in addition to rendering your best prophylactic and restorative service, you are contributing in a large measure to the dental health of your community. You are not, however, contributing *enough* unless you make your influence reach out beyond the confines of your office, beyond your own clientele.

You *may* say that you do not have time to do more — your practice which is most important to your livelihood consumes all of your time. Or you may say "Let George do it" since you pay dues to your dental society, small though they be, for the protection and benefits derived. This is not a valid answer. "George" cannot do it without *your* help. *You* meet people day in and day out with whom *you* have the most influence in dental matters. Right at your dental chair you can help those other members of your community who never reach a dental chair.

Your practice consists of a cross-section of American life—many leaders of your community—civic leaders—clergymen, teachers, politicians, members of parent teachers organizations and service clubs, physicians, labour leaders, big and small business men, and parents. *You* are their dentist and they look to you for dental information. Few if any of them know the enormity of the dental health problem. It is your responsibility to your community and to your profession to inform them.

If you do not have all the correct facts, they are available through your state and A.D.A. councils on dental health. Much *mis*-informa-

tion as to the causes and effects of dental diseases has been disseminated in the past. Little has been told the rank and file of the public of the carefully planned long-term practical program being developed by your state and A.D.A. councils on dental health to improve the dental health of the nation. You can bring this authoritative information directly to the people of your community.

You can familiarize yourself with the latest developments in this program by taking an active part in your state and local council on dental health. Read the literature, magazines and pamphlets available which describe the program — the caries control program, our goals and principles, the progress of fluorine therapy and other preventive measures. You can participate in the dental health workshops when they are held in your state. Learn the latest accepted terms to explain dentistry's program to your patients. This is your duty to yourself, your profession and to the public as a doctor—a teacher.

By such a united effort and interest of its individual members, the dental profession can develop and carry out a program for the American people which will be practical and in the best interest of both the dental profession and the public health, and dentists can avoid the foisting of programs sponsored by impractical planners and opportunists.

You can guide the destiny of dental health service in America! It is your professional duty to impart the latest authentic dental information to the people of your community and help to counteract mis-statements and plans that are inimical to public health and the practice of good dentistry!

The Professional Relations Committee
Council on Dental Health
American Dental Association

Chicago Industrial Health Plan

The Chicago Industrial Health Plan will soon launch a program to bring to workers in industrial plants information on health and health services. The Plan will coordinate existing health education programs and provide a central channel through which health agencies can work with industry cooperatively.

The contemplated program will present to workers in industrial plants a coordinated program of health education, containing the various diagnostic services, including immunization, blood tests, hearing and vision testing, tuberculosis x-ray and dental services. Film showings, health education lectures and posters, charts, pamphlets and other material will be supplied.—*F. Rev. of Chi. D. Soc.*

World Medical Association

Although world peace is a fundamental objective of the World Medical Association, the report of the September 18th meeting indicates that the meeting was not wholly peaceful. Forty-eight nations were represented. The two principle objectives determined were promotion of closer ties among the national medical organizations and among the physicians of the world and study and report on professional problems that confront the members of the medical profession in various countries.

Among the significant actions taken was a resolution that German delegates would not be admitted to the World Medical Association until organized medicine in Germany condemned past criminal acts of German physicians.—*The World Medical Association, J. of the American Medical Association* 135: 514, October 25, 1947, per Public Health Economics.

IN MEMORIAM

Earl Sherriff Ball, of Toronto, Ontario, aged 62, died December 6 from a heart attack. He was graduated from the Royal College of Dental Surgeons of Ontario in 1908 and had practised in North Toronto for 37 years.

He was one of the founders of the North Toronto Dental Association and also a past president of this organization. He was a member of Eglinton United Church and on the

Board of Stewards and the Board of Trustees. He was a former member of Lawrence Park Bowling Club. He was a past president of the Canadian Philatelic Society and a member of the Toronto Philatelic Club. He was also a member of Metropolitan Lodge A.F. and A.M.

Dr. Ball is survived by his widow, a daughter, a son and one grandson.

IN MEMORIAM

J. Frank Giffen, of London, Ontario, aged 49 died December 6 from a heart condition, following pneumonia. He will be greatly missed in official dental circles in Canada as he held many responsible positions. A full obituary notice appeared in last month's Journal in the Ontario News Section.

Ralph Eric Macdonald, of Vancouver B.C., aged 70, died November 27 from a heart attack. He was graduated from Philadelphia Dental College and practised for 13 years in Halifax before moving west in 1917. He practised in Vancouver for three years and in Rossland until 1940 when he retired.

He played an outstanding part in the establishment of a dental faculty at Dalhousie University, where he was a lecturer for five years. He was former secretary of the Nova Scotia Dental Association and a former president of the Halifax Dental Association.

Dr. Macdonald is survived by his widow, two daughters, two grandchildren and four sisters.

John Ambrose Lambertus, of Eganville, Ontario, aged 72, died suddenly on November 25. He was graduated from the Royal College of Dental Surgeons of Ontario in 1898 and later took a post-graduate course at Philadelphia.

Last April 1, he celebrated his fiftieth anniversary in dental practice in Eganville and was made an honorary member of the Royal College of Dental Surgeons.

He was secretary-treasurer of the Separate School Board for 25 years, and was a member of the Knights of Columbus and the Eganville Rotary Club.

For many years he was known widely as a poultry breeder, carrying it on as a hobby, winning awards in many parts of the world. In 1924 the Department of Agriculture presented to the late King George V his champion Barcelona World Poultry Congress Barred Plymouth Rocks.

Dr. Lambertus is survived by his widow, two sons, two daughters, two sisters and a brother.

Wallace Milbert Johnson, Almonte, Ontario, aged 59, died on December 4. He was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1919 and set up practice in Almonte.

He was a member of Mississippi Lodge A.F. & A.M. and the Granite Chapter.

Dr. Johnson is survived by his widow, one son and two daughters.

Luke Gardiner Fraser of Gananoque, Ontario, aged 52, died on December 5. He was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1919.

He set up practice immediately in Kingston but shortly after moved to Gananoque where he practised until his death.

Dr. Fraser was a member of Grace United Church and a member of its Board of Trustees. He was a past president of Rotary and a past master of Leeds Lodge A.F. & A.M.

Dr. Fraser is survived by his widow.

William James Lea, of Vancouver, B. C., aged 65, died December 20 from a heart attack while going to his office on a bus. He was graduated from the University of Toronto in 1905, and in 1908, registered in British Columbia.

In 1919 he was elected a member of the Council of the College of Dental Surgeons of British Columbia and in the same year was appointed Registrar-Treasurer of the Council. In 1929 he was elected a Fellow of the International College of Dentists.

He was a member of the Pacific Coast Society of Orthodontists and the American Association of Orthodontists and in 1932, received a certificate from the American Board of Orthodontia in recognition of his fine record as an orthodontist and for his service to dentistry.

In 1930 he was appointed B.C. representative on the Executive Council of the Canadian Dental Hygiene Council and in 1938 was President of the Pacific Coast Dental Conference.

Dr. Lea is survived by his widow, two sons and two daughters.

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PREVENTION DES MALOCCLUSIONS *

par LOUIS LEPINE, B.A., D.D.S., Orthodontiste, Montréal

Jusqu'à ces tout derniers temps, dans les réunions régulières des sociétés dentaires locales, comme dans les congrès dentaires régionaux, on mettait au programme des articles scientifiques de grande valeur instructive sur les sujets habituels: dentisterie opératoire, prothèse, chirurgie, endodontie et autres encore. On parlait rarement de pédodontie, de dentisterie pour les enfants, par conséquent *de prévention*. On insistait toujours, le plus souvent, sur le traitement d'un trouble existant, mais rarement sur la prévention de ce trouble. On sait bien plus ce qu'il faut faire pour corriger un mal, on sait moins souvent le prévenir et pourtant mieux vaut prévenir que guérir. Le but de notre profession est de rendre service à l'humanité souffrante de quelque façon que ce soit, mais on s'éloigne bien de ce but, quand néglige la prévention pour ne s'occuper que la restauration ou de la correction. Heureusement une grande amélioration s'est produite dans ce domaine et, de plus et plus, la fréquence des conférences sur la prévention en dentisterie est très marquée. Mais Brauer avait raison de nous dire "Il n'y a pas longtemps qu'on pense en termes de prévention."

Les standards de qualification en dentisterie augmentent d'année en année, et, avec les efforts dirigés vers la prévention

et sa mise en pratique, la profession rendra de plus grands services à l'humanité, et Salzman ajoute "dans l'âge présent d'éducation dentaire, la demande pour la prévention des maux dentaires a progressé à tel point que le traitement préventif des malocclusions futures appartient complètement au praticien général en dentisterie."

Waugh considère que la prévention des malocclusions est avant tout le devoir du praticien général en dentisterie. Lamons nous dit: "Tout comme en médecine, le praticien en dentisterie, et non le spécialiste, est responsable de la santé buccale de la population," et il ajoute que, "Dans la prévention des malocclusions le dentiste de famille est celui qui doit pratiquer la prévention, et non le spécialiste en orthodontie, car celui-ci ne voit le patient que lorsque la malocclusion existe." Lors quand le dommage est fait, il n'est plus temps de prévenir, mais seulement de guérir. L'orthodontiste peut alors diriger le dentiste, l'aider de ses conseils. Spencer nous dit: "Puisque 50% des cas de malocclusion auraient pu être prévenus, c'est alors à l'orthodontiste, qui en connaît les causes et les résultats, de mettre des moyens à la disposition du praticien pour les prévenir."

*Conférence donnée devant La Société Dentaire des Trois-Rivières et du District, le 31 mai 1947.

Nous allons donc parler ensemble de prévention des malocclusions. Nous allons discuter du sujet de façon à ce qu'il soit d'un intérêt particulier et pratique. Nous allons discuter des causes générales des malocclusions pour ensuite leur trouver des remèdes préventifs. Nous allons chercher ce qu'il faut faire et ne pas faire dans la pratique de la prévention.

L'orthodontie peut être envisagée de deux façons, comme dans toutes les branches de la médecine et de la dentisterie, par la prévention des malpositions dentaires et par la correction de ces malpositions. Dans l'une, il s'agit de prévenir le fait que les dents prennent, par une influence quelconque, une position contraire à l'esthétique ou à leur fonction de mastication, dans l'autre il s'agit de corriger et, si possible, de rétablir l'esthétique et la fonction normale. L'orthodontie préventive, c'est-à-dire la prévention, est le propre du dentiste et se pratique surtout chez l'enfant.

Croissance et développement dentaires.

Puisque la prévention concerne l'enfant, voyons un peu sa croissance générale en rapport avec celle des dents. La croissance de l'enfant est répartie en périodes actives et en périodes ralenties ou retardées, tout en demeurant normales. De la conception à la naissance, alors que les dents sont en train de se former, de se calcifier, les maxillaires prennent vite leur forme caractéristique. C'est une période active de croissance. De la naissance à l'âge de 7 ans, les temporaires font graduellement leur éruption, et les permanentes sont en voie de formation. Vers la fin de cette période, la première dent permanente, la molaire de 6 ans, fait son éruption pour venir supporter l'occlusion durant la période de transition de la dentition temporaire à la dentition permanente. C'est alors une autre période active de croissance. Les maxillaires doivent se développer au fur et à mesure que les dents progressent vers leur éruption. De 7 à 11 ans, c'est une période de chute des temporaires, d'éruption des permanentes, période de transition, alors période de croissance ralentie, mais non moins importante. La dentition est mixte

et se maintient à 24 dents sans addition naturellement, mais avec des absences temporaires dues au remplacement. La croissance du maxillaire se poursuit, au ralenti, il y a changement dans l'occlusion, qui passe de l'occlusion fermée à l'occlusion ouverte. C'est une période de croissance ralentie, mais c'est une période critique, nous le verrons plus loin.

De 11 à 16 ans, une nouvelle période de croissance active, les 24 permanentes sont sorties ou finissent de sortir. Il y a croissance accélérée du maxillaire pour faire place à la dent de 12 ans: une molaire additionnelle portant le nombre à 28 dents. C'est une période où l'on constate souvent une apparition active de caries, due au fait que l'enfant passe de l'adolescence à la puberté, grandit rapidement, prenant du système tout le calcium qu'il peut lui fournir, enlevant ainsi ce qui revient aux dents. Et, comme dernière période, celle de 16 à 21 ans, est marquée comme une croissance ralentie, une croissance finale, on pourrait dire, celle où les permanentes finissent de se former, de se calcifier et se consolident dans leur alvéole respective, période terminée par l'apparition de la dent de sagesse, la 3^{ème} molaire, qui vient s'ajouter aux autres pour former le nombre final de 32 dents. Elles ne se montrent pas souvent, ou très mal, ces pauvres dents de sagesse: on va même jusqu'à dire qu'elles disparaîtront dans les générations futures, puisqu'elles n'ont plus d'usage ou à peu près pas.

La prévention se pratique depuis l'âge de 3 ans, alors que les vingt temporaires sont formées et sorties, jusqu'à onze ans, c'est-à-dire après la dentition mixte. Le dentiste s'occupe du bon état des temporaires dans la dentition temporaire, et des temporaires et permanentes dans la dentition mixte. Les trois dentitions ont un but, il ne faut pas qu'un état anormal vienne les entraver, parce que la répercussion se fera sentir sur la position des dents en la rendant anormale. L'orthodontiste s'occupe des enfants de 11 à 16 ans. Il traitera la dentition permanente irrégulière, en activant la croissance retardée. Pendant que les dents passent par ces périodes, les maxillaires et les arcades

se développent. Ils croissent en hauteur, en largeur et en longueur afin de permettre aux dents de se loger au fur et à mesure qu'elles sortent. Lorsqu'une maladie d'enfant, comme le coqueluche, la rougeole, la varicelle, la scarlatine et d'autres, est sévère, elle a une influence sur la croissance, qui est à un stage actif, et la retarde. Il y a retard, les dents continuent à se former et les maxillaires à se développer, mais à une allure ralentie. La première dentition étant dérangée dans son cours normal de croissance, la dentition mixte l'est aussi et la permanente de même. La maladie chez l'enfant a une influence reconnue sur les dents et les maxillaires; elle est alors une cause de malocclusion.

Puisque l'enfant ne va malheureusement pas chez l'orthodontiste avant 11 ans en moyenne, quand le tort est causé, c'est aux dentistes que revient la tâche d'éviter ces troubles futurs, en ayant soin des enfants. Le dentiste sait que l'enfant, en grandissant, passe par des périodes de croissances qui sont actives, et par d'autres qui sont ralenties, retardées. Il connaît les dates de formation, d'éruption, de chute des temporaires et celles de formation, d'éruption des permanentes. Mais, il serait bon, de temps à autre, de consulter les tableaux de chronologie des dentitions, comme celui de Logan et Kronfeld par exemple, tout en se souvenant, comme nous dit Spencer, "que l'époque d'éruption des dents dépend bien plus du stage de croissance individuelle que d'un tableau basé sur des statistiques." Peut-être devrait-on faire les remarques suivantes qui s'y rapportent. Puisqu'il y a déjà formation de dents à l'âge prénatal, la diète appropriée, et le maintien du plus haut degré de bien-être physique durant la gestation sont des nécessités essentielles sur lesquelles il nous faut insister auprès de la mère. Il est indispensable pour elle de consulter son médecin, de préférence l'obstétricien, sur la diète à suivre dans la nutrition, pour compléter aussi ou balancer l'absorption de vitamines constructives. La calcification des os et des dents, étant commencée dans le fœtus, demande chez la mère enceinte une consommation supplé-

mentaire des éléments essentiels à ce processus, éléments qu'elle doit être en état de fournir. Elle doit également consulter son dentiste régulièrement durant toute sa grossesse, c'est entendu, et il faut y insister beaucoup.

A six ans, la première molaire permanente fait son apparition pour venir supporter l'occlusion pendant toute la période de transition des deux dentitions, appelée période de dentition mixte. Durant cette période, il se produit souvent une occlusion fermée, un effondrement de l'occlusion. Il ne faut pas trop s'en inquiéter, à mesure que les permanentes sortiront, elle s'ouvrira graduellement grâce à la croissance verticale de l'arcade, surtout active à la sortie des prémolaires, de 10 à 12 ans. Il se présente des irrégularités de position des dents temporaires antérieures inférieures qui se corrigeront avec la croissance en largeur du maxillaire. C'est là qu'il faut éviter d'enlever une temporaire dans le but de permettre aux dents de revenir en ligne. De même lorsque les incisives inférieures permanentes viennent de sortir, on n'enlève pas les canines temporaires pour les égaliser, car elles se placeront d'elles-mêmes avec le temps.

La dentition permanente est toute complétée vers l'âge de 18 à 21 ans. Les cas de trente-deux dents en occlusion sont très rares, ceux de vingt-huit dents en occlusion normale sont assez fréquents. Il y a souvent des surnuméraires, des dents congénitalement absentes, et aussi des dents incluses malheureusement, mais nous en parlerons plus loin. Les troisièmes molaires sont souvent cariées et presque jamais en occlusion, et sont inutiles plus souvent qu'autrement. Elles ne se conservent pas saines parce qu'elles ne subissent pas assez facilement le nettoyage mécanique durant la mastication ou le nettoyage artificiel par la brosse à dents, justement à cause de leur position anormale. Qu'elles viennent en occlusion par suite de l'extraction des deuxième molaires, elles se maintiendront en bon ordre et carieront moins facilement. La troisième molaire est très souvent incluse, ou l'est partiellement; son extraction cause sûrement moins de tort que de la laisser

en place faire pression sur les autres dents, une pression assez forte pour qu'elle pousse labialement une canine.

Il est bon de bien garder en mémoire la chronologie et les phases de croissance, surtout pour la dentition temporaire et la dentition mixte, alors que c'est le temps de faire de la prévention. La prévention se pratique depuis l'âge de trois ans. Toute erreur commise à partir de cet âge est fatale pour la malocclusion, qui s'ensuit. La radiographie est une aide importante dans un diagnostic, dans une décision d'extraction. On extrait pas à tort ou à travers une temporaire, parce qu'elle n'est pas supposée être importante puisqu'elle doit tomber. La dentition temporaire est là dans un but, elle a sa raison d'être, il faut la conserver jusqu'à ce qu'elle ne serve plus. Malheureusement, on y attache trop peu d'importance. 50% des cas de malocclusions sont causés par les extractions prématurées. Les pauvres enfants sont bien négligés pour ce qui est de leurs dents. C'est une triste lacune. Intéressons-nous aux dents des enfants, qui constitueront notre clientèle de demain. Il n'y a pas de meilleure dépense pour les dents que celle qui est faite pour son enfant, elle en évite une bien plus grande.

Le premier point dans la question de prévention, c'est celui de l'état général du patient, son état endocrinien, métabolique et nutritif. Dès qu'on s'aperçoit qu'il est anormal, on doit aussitôt référer le patient au pédiatre ou à son médecin qui donnera une médication appropriée. Ces troubles surviennent à des périodes importantes de croissance générale comme de croissance dentaire. N'oublions pas qu'il y a des exigences nutritives et endocriniennes dans le développement de la dentition. Point n'est nécessaire de connaître ces sujets à fond pour le dentiste; comme ils ont vite fait de se traduire par des symptômes dans la bouche, il fait être en état de découvrir leur mauvais fonctionnement et d'y donner une attention immédiate. Il faut aussi être au courant de la chronologie de la croissance mentionnée plus haut. Tout dérangement endocrinien ou nutritif laissera sûrement une marque sur les permanentes ou sur leur position, s'il

se produit à une époque de croissance.

Avec Higley, nous pouvons dire que l'éruption normale physiologique n'est généralement accompagnée que de dérangements mineurs: tuméfaction de la gencive, salivation abondante, goût de tout porter à la bouche pour mordre, dérangement légers du système digestif et intestinal, un peu de fièvre. Il est rarement nécessaire de lancer la gencive. L'éruption des premières et secondes molaires permanentes est souvent accompagnée d'infection gingivale, même de Vincent. La cause de l'éruption prématurée ou tardive des dents est habituellement due à l'état général, mais elle peut aussi être d'ordre mécanique, par suite du manque d'espace suffisant, de la présence de dents surnuméraires, etc.

Frein de la lèvre supérieure.

Une autre cause de malocclusion, qui n'implique pas les dents, mais qui a un effet nuisible sur elles, quand il est anormal, c'est le frein de la lèvre supérieure, communément appelé "filet de la lèvre." Le frein est un filet de tissu fibreux servant à retenir la lèvre. Il fait son insertion supérieure dans le repli muqueux de la lèvre et son insertion inférieure, juste au-dessus de la papille entre les centrales. Il devient anormal quand il se prolonge et passe entre les centrales en les écartant pour aller s'insérer sur la papille linguale ou bien quand il renferme un nodule entre les centrales. Le frein anormal peut être mince ou large, en éventail. S'il est mince, l'espace médian qu'il cause n'est pas important. S'il est large, l'espace est grand et il faut parfois l'enlever. L'ablation du frein est une opération assez simple et peu douloureuse, mais qui exige de l'opérateur certaines connaissances de chirurgie pour éviter la formation de tissu cicatriciel plus résistant que le frein. On ne doit pas enlever tous les freins, car le frein a sa raison d'être. Il permet, nous dit McCoy, l'élargissement normal de l'arcade jusqu'à l'éruption des canines. Ne nuisons donc pas à ce facteur nécessaire au développement.

Quant à l'ablation du frein anormal, sa nécessité cause beaucoup de contro-

verse. Que le frein anormal cause la séparation des centrales supérieures, cela ne fait pas de doute, et que, à cause de cet éloignement des centrales, les latérales manquent d'espace et ne peuvent sortir normalement, c'est reconnu et accepté. Mais que son ablation soit nécessaire dans tous les cas, c'est empirique. Il ne faut pas conseiller l'ablation du frein anormal dès qu'on constate son existence. Il faut tout de même laisser à la nature la chance de réparer l'erreur.

L'irrégularité des antérieures supérieures n'est pas toujours causée, entre autres choses, par un frein anormal. C'est assez normal pour deux centrales d'être espacées à leur éruption, mais la pression que font les latérales, en sortant, entraîne leur rapprochement, même si c'est le frein anormal qui a causé l'espace. Si les latérales ne suffisent pas, les canines viendront ajouter leur pression pour compléter le travail de rapprochement. Lorsque les centrales sont en accent circonflexe avec racines convergentes, ce n'est pas nécessaire de faire l'ablation du frein; encore ici la sortie des dents voisines fermera tout probablement l'espace dans la plupart des cas. Lorsque les centrales sont en V avec les racines divergentes, ce n'est pas non plus nécessairement causé par un frein anormal. Si les latérales, en sortant, ne corrigent pas l'irrégularité des centrales, c'est que le frein en est la cause, il doit alors être enlevé. Lorsque deux centrales sont très espacées, la cause probable, si ce n'est pas le frein, c'est l'absence congénitale des latérales et nous en parlerons plus loin. Un moyen bien facile pour voir si le frein est anormal est de tirer la lèvre supérieure et d'appuyer le doigt en haut du frein. S'il blanchit jusqu'à la papille linguale et s'il semble large, il est nécessaire de le faire enlever, en général.

Les habitudes dentaires.

Une autre cause, non dentaire, qui a un effet néfaste sur les dents et l'os, ce sont les habitudes dentaires chez l'enfant, comme celles de sucer le pouce, de mordre la langue, la lèvre, la joue. Ces habitudes ont tôt fait de déranger la position des dents, de creuser le palais, de rétrécir

les arcades, d'ouvrir l'occlusion. Ces méfaits sont connus de tous, parce que la cause se rencontre bien souvent. Il est bon d'en dire quelques mots.

Un enfant ne parle pas, il ne peut donc avertir la mère d'un manque de nourriture, d'un manque de vitamines nécessaires à son maintien, à sa croissance. Alors, son instinct naturel le montre à sa mère, en mettant le doigt à la bouche, donc par où l'enfant doit recevoir ce qui lui manque, tout comme il touchera à son oreille, s'il y sent un malaise. La répétition constante de cet acte entraîne l'habitude, c'est l'acte devenu inconscient. On peut qualifier ces habitudes de pernicieuses, parce qu'elles sont difficiles à enrayer et qu'elles sont dommageables à la figure, au palais, à la denture. Il y a celles de sucer le pouce, les doigts, de mordre la lèvre inférieure, la langue, la joue, les ongles, il y a la posture incorrecte dans le sommeil ou en classe, la position anormale de la mandibule, d'autres encore.

Les résultats de ces habitudes ont un effet compréhensible sur les dents et les arcades, même sur l'apparence de la figure, car l'enfant en sucant son pouce, par exemple, fait une pression de douze onces sur le palais et les dents. Il n'est pas surprenant que ces dernières se déplacent, puisqu'en orthodontie nous mesurons maintenant la pression appliquée sur les dents et les arcades. Une pression de trois à cinq onces suffit pour élargir une arcade, reculer une molaire, reculer les antérieures.

L'habitude est le symptôme d'un manque de quelque chose, une carence; pour enrayer cette habitude, il faut d'abord supprimer la cause, en conseillant à la mère de voir son médecin, ou bien le pédiatre. Un moyen assez effectif est de conseiller l'absorption additionnelle de sels minéraux, de calcium, de fer, parce que, généralement, il y a carence de ces sels dans un système en période exigeant une quantité supplémentaire. Une fois la cause enrayée, il faut corriger l'habitude, si on le peut. Plus l'habitude dure, plus il est difficile d'y parvenir. Si elle date de longtemps, il faut de la patience, il en faudra peut-être pendant six mois ou

un an pour réussir à l'enrayer. Levy a une suggestion qui est effective, mais qui n'est pas acceptée de tous, c'est le retour au pacificateur, à la suce proprement dite. L'habitude de la suce est assez vite perdue, soit par raisonnement, soit par diminution graduelle de l'emploi. Si l'habitude dure depuis deux ou trois ans, il faut aussi user de psychologie pour l'enrayer, autrement on rendra l'enfant nerveux. En s'acharnant à le reprendre, ou plus dangereusement encore, à le ridiculiser, on risque de lui donner un complexe d'infériorité, un sens de culpabilité, en plus de le rendre hypocrite. Le plus sûr moyen d'enrayer l'habitude de sucer le pouce, le doigt, c'est d'abord de le faire dès qu'elle se montre, sans nullement tarder, même à l'âge de trois semaines, nous dit Higley. On peut employer la mitaine, le pouce de métal, le soir au coucher, car c'est à cette période de la journée que l'habitude est le plus active. Il faut, je le répète, de la patience pendant six mois ou même plus. L'enfant souffrira d'insomnie durant une ou deux nuits, et les parents aussi. Il faut persister, sans y manquer, même un soir, que ce soit par tendresse naturelle ou non. Il y a des cas où cela ne réussit pas, c'est entendu; mais la répression de cette manie s'accomplit assez souvent qu'il vaut la peine de l'essayer. Si c'est une habitude bien ancrée, il ne faut pas s'attendre à ce qu'elle disparaisse rapidement. Conseillez aux parents de la tenacité, et ils réussiront.

Cette habitude, souvent accompagnée d'une autre, comme celle de se gratter

l'oeil, l'oreille, dure généralement jusqu'à quatre ans, et si elle est enrayerée vers cet âge, le dommage peut se corriger avec le développement normal de l'enfant. On a vu des cas exceptionnels, où elle durait bien plus tard. Vous connaissez tous le cas de la jeune fille de 25 ans qui quittait temporairement la table de bridge pour aller sucer son pouce dans la pièce voisine. Heureusement, c'est l'exception. L'habitude de se ronger les ongles est fréquente, surtout chez les nerveux, contrairement à celle de sucer le pouce qui se rencontre chez les placides, elle n'est pas moins dommageable.

L'enfant, qui a l'habitude de mordre sa langue, cause une occlusion ouverte et cette habitude peut être enrayerée avec une bague sur une antérieure inférieure, bague à laquelle on soude une pointe pas trop aigüe. L'enfant se piquera la langue une bonne fois et il s'en souviendra assez pour perdre cette habitude.

La déviation du maxillaire inférieur est le résultat de l'habitude de dormir sur le ventre, ou sur un oreiller, ou bien résulte de l'habitude de s'appuyer sur la main à l'école. Il faut habituer l'enfant, dès le bas âge, à dormir sur le dos comme sur le ventre, sans oreiller, afin qu'il continue de même par la suite.

Vous avez une idée des irrégularités causées par ces habitudes, des retards causés à l'éruption des permanentes, à la chute des temporaires. On pourrait en parler longtemps. Il faut se souvenir que l'habitude peut et doit être enrayerée et vous rendrez un service énorme aux enfants.

(à suivre)



Dans le monde dentaire

Congrès de 1948.

Le Comité du Programme du Congrès National de 1948, à la Malbaie, a été constitué en septembre et s'est mis à l'oeuvre immédiatement. Ce Comité est formé des membres suivants:

Président.....Docteur Gustave Ratté
Vice-Président...Docteur Rémy Langlois
Secrétaire.....Docteur Viger Plamondon
Trésorier.....Docteur Rodolphe Talbot
Conférences et Cliniques—

Docteur Wilfrid Leahy

Docteur Philippe Hamel

Réception et Distractions—

Docteur Rémy Langlois

Docteur Jacques Samson

Docteur Jules Hamel

Docteur Ls-Ph. Gariépy

Transport.....Docteur Lucien Beaumont

ExposantsDocteur Bourdon

Docteur Albert Moisan

Programme...Docteur Viger Plamondon

Publicité.....Docteur Paul Lajeunesse

Inscription.....Docteur Louis Bernier

Logement.....Docteur Antonio Reny

Des annonces, au sujet de ce Congrès, apparaîtront régulièrement dans le Journal.

Bourses d'études pour l'Université de Montréal.

La Fondation Kellogg vient d'offrir à la faculté de Chirurgie Dentaire de l'Université de Montréal deux bourses d'études, une en Pédodontie et l'autre en Périodontie. Ces deux bourses ont été confiées à deux jeunes diplômés, qui poursuivront aux Etats-Unis des études d'une année, dans ces deux spécialités.

La Fondation Kellogg renouvelle son octroi à l'Université de Montréal.

Pour une deuxième année consécutive, la Fondation Kellogg a fait un don substantiel à la faculté de Chirurgie Dentaire pour lui permettre d'organiser et de mener à bonne fin des cours de perfectionnement en Chirurgie, Prothèse, Endodontie et Orthodontie.

Ces cours commencés, l'an dernier, se continueront cette année, à des dates, qui ont été annoncées ou qui seront annoncées, dans le Journal.

Conseil National de Recherches et la science dentaire.

Le Conseil National de Recherches vient de mettre à la disposition du Docteur Jules Thébaud, de Montréal, une bourse, qui sera consacrée à des recherches sur la Parodontose. Ces recherches seront entreprises à la faculté de Chirurgie Dentaire de l'Université de Montréal.

Cours de perfectionnement à l'Université de Montréal.

Les cours de perfectionnement offerts aux praticiens de l'Est du Canada, sous les auspices de la Fondation Kellogg, auront lieu aux dates suivantes:

Chirurgie et Anesthésie: du 19 au 24 avril (cours d'une semaine complète); les 9, 10, 12, 17, 18 et 19 février; 8, 9, 11, 16, 17 et 18 mars (2 semaines, à raison de 3 jours, par semaine).

Endodontie: 24 février, 2 et 9 mars; les 6, 13, 20 avril (trois journées complètes, à raison d'une journée par semaine); du 19 au 24 janvier; du 3 au 8 mai (une semaine complète).

Prothèse: 9 au 14 février; du 5 au 10 avril (une semaine complète); du 23 février au 6 mars; du 12 au 24 avril (cours de deux semaines, à raison de 6 demi-journées par semaine).

Pour tous les renseignements, s'adresser au doyen: Dr Ernest Charron, 2900 Boul. Mont-Royal.

Amendements à la loi dentaire de l'Ontario.

La législature ontarienne vient de mettre en vigueur une loi, qui amende la constitution du Collège des Chirurgiens-Dentistes de cette province et qui permet à ce dernier:

1) d'instituer, de développer, de régler et de contrôler la formation et

l'organisation des hygiénistes dentaires.
2) de hausser la cotisation annuelle des membres à vingt-cinq dollars.

Cotisation à l'A.D.C.

La province d'Ontario vient de porter à dix dollars par tête la cotisation des membres à l'Association Dentaire Canadienne. Cette mesure prendra effet immédiatement.

Nouveau représentant pour l'Alberta.

L'Association Dentaire d'Alberta vient d'appointer, comme son représentant à l'A.D.C., le Dr H. Baden Powell, de Calgary. Le docteur Baden Powell remplace, au Bureau des Gouverneurs de l'Association, le Dr R. A. Rooney, ancien président de l'Association, qui siégeait, comme gouverneur, depuis plusieurs années.

Conférence dentaire indienne.

Les membres de l'Association Dentaire Canadienne sont invités à assister à la troisième Conférence Dentaire Indienne, qui aura lieu à Bombay, Indes, du 19 au 22 février prochain.

La Saskatchewan et le Nouveau-Brunswick augmentent leur cotisation annuelle.

Ces deux provinces ont augmenté leur cotisation annuelle à l'A.D.C., qui sera, dorénavant, de \$8.00 par membre. Six provinces ont fait de même, à date. Une autre province a porté sa contribution à \$10.00 par membre.

Le gouvernement du Manitoba crée une Commission Dentaire.

Le Ministère de la Santé et du Bien-Etre Public de la Province du Manitoba vient de créer une division dentaire, dans le Service de la Santé. Le docteur W. G. Campbell, qui vient de suivre un cours en Hygiène Publique à l'Université du Michigan, a été nommé directeur de ce bureau. Le fonctionnement de la Loi des Services de Santé du Manitoba est à un stage d'organisation et de tâtonnement.

A date, la dentisterie est considérée comme, mais ne fait pas partie des services touchés par la loi. La distribution des soins dentaires n'est pas encore fixée et la collaboration de la profession dentaire, pour régler ce problème, est recherchée par le gouvernement. L'intention du gouvernement est d'élaborer et de mettre en force un programme de dentisterie préventive. Il est à souhaiter qu'il soit possible de donner aux enfants de cette province des traitements préventifs d'hygiène dentaire.

Voyage du président dans l'ouest du pays.

Durant le mois d'octobre, le président de l'A.D.C., accompagné du secrétaire, a payé une visite officielle à toutes les sociétés dentaires de l'ouest du pays.

Le président, le docteur Carver, a porté la parole, à toutes ces réunions, pour traiter des problèmes et des réalisations de l'Association. Ces convocations groupèrent de nombreux dentistes, qui manifestèrent beaucoup d'intérêt pour les affaires de notre Association.

Les dentistes, qui sont au nombre des "Personnes Déplacées", dans les camps d'Europe.

Il s'exerce un travail de persuasion assez fort auprès des autorités pour faire entrer au Canada des dentistes, qui sont au nombre de ces individus "sans patrie," logés dans de vastes camps, en Europe. S'il faut juger du nombre de ces dentistes, qui désirent venir dans notre pays, par l'accumulation de correspondance à ce sujet aux quartiers-généraux de l'A.D.C., il faut croire qu'ils sont nombreux. Récemment, des statistiques indiquaient que 11% de ces personnes sont des professionnels. En raison de la pénurie de dentistes, dans certaines régions rurales du Canada, on a suggéré que ces dentistes européens soient amenés de ce côté-ci de l'Atlantique.

A plusieurs reprises, durant ces dernières semaines, l'Association Dentaire Canadienne fut pressentie pour connaître son avis à ce sujet. Dans l'opinion de l'A.D.C., la formation dentaire de ces

dentistes, révélée par l'examen de leurs qualifications, n'égale pas celle des dentistes de ce pays. L'Association ne croit pas que ces dentistes possèdent l'entraînement suffisant pour rendre de réels services à la population canadienne. Les écoles dentaires du Canada sont remplies à pleine capacité et ne peuvent prendre d'élèves supplémentaires, qui seraient ces dentistes étrangers. En un mot, l'assentiment est que ces confrères doivent répondre aux qualifications des Collèges des Dentistes de chaque province, c'est-à-dire à l'équivalence de la compétence exigée des étudiants canadiens.

Comité des publications.

Le Comité des Publications de l'A.D.C. s'est réuni, à Montréal, le 23 octobre, en compagnie des rédacteurs. En résumé, les décisions suivantes ont été prises:

- 1) Une nouvelle couverture a été choisie et sera utilisée, à partir du 1er janvier 1948.
- 2) L'espace réservé au texte, dans le Journal, sera augmenté de quelques pages, tous les trois mois.
- 3) La date de parution a été l'objet d'une discussion élaborée. L'explication fournie par les imprimeurs met ce retard à l'impression sur la faute de la rareté des machineries et sur d'autres motifs, qui échappent à leur contrôle. Ces raisons expliquent l'impossibilité de suivre une cédule régulière. Mais ces difficultés doivent être réglées dans un avenir rapproché.
- 4) L'augmentation formidable des dépenses d'impressions est une source d'ennui pour le Comité.
- 5) De plus, des questions de moindre importance furent solutionnées, entre autres la question de la disposition du texte, dans le Journal.

Conférence sur l'arthrite et le rhumatisme.

Le Ministère du Bien-Etre et de la Santé Nationale a convoqué, à Ottawa, les 13 et 14 octobre 1947, une conférence des principaux organismes intéressés au problème de l'arthrite et du rhumatisme. Le repré-

sentant de l'Association Dentaire Canadienne était le Dr D. P. Mowry, de Montréal. Cette réunion était sous la présidence de l'Honorable Paul Martin, ministre du Bien-Etre and de la Santé Nationale.

A cette assemblée, on fit une revue de la connaissance actuelle du rhumatisme en rapport avec le nombre de personnes qui souffrent de cette maladie, qui groupe environ 200 affections différentes sous cette appellation. Le but de cette réunion était de mettre sur pied une organisation capable de résoudre ce problème.

Les résolutions suivantes furent adoptées:

Reconnaissant que le rhumatisme, sous différentes formes, cause des souffrances et des pertes inestimables à la population canadienne et reconnaissant que la connaissance actuelle au sujet du diagnostic et du traitement de cette maladie est insuffisante et, de plus, reconnaissant qu'il est impérieux qu'une étude plus approfondie de l'étiologie, de la prévention et du traitement de cette affection soit instituée, il est décidé:

- 1) Qu'on établisse une Société Canadienne de Rhumatisme et d'Arthrite;
- 2) Que l'objectif de cette Société soit de promouvoir: a) le diagnostic; b) le traitement; c) la prévention; d) la formation d'un personnel professionnel adéquat (bourses d'études, etc); e) la recherche; f) la vulgarisation des données scientifiques auprès des populations; g) la perception de fonds. De plus, cette Société est appelée à poursuivre ces objectifs et, pour ce, à collaborer avec d'autres organismes appropriés. La participation à cette Société est ouverte aux individus, comme aux organismes dûment constitués.

Nécrologie.

A l'âge de 61 ans, le 16 novembre, est mort le docteur Eugène Côté, qui avait exercé son art, toute sa vie, dans le quartier Ste-Cunégonde de Montréal. Né à Windsor Mills, le docteur Côté avait complété ses études classiques à Sherbrooke et ses études dentaires à l'Université de Montréal.

Nos sympathies aux membres de sa famille.

Congrès National des Dentistes Canadiens au Manoir Richelieu

en juin 1948

Dans notre paradis laurentien, il se trouve un petit village canadien-français qu'on appelle La Malbaie. Quelques milles avant d'y arriver, c'est-à-dire à Pointe-au-Pic, c'est le site du fameux hotel fashionable, le Manoir Richelieu, qui nous apporte sa propre atmosphère d'enchantements. Construit sur le versant de la montagne, qui, elle-même, est un rocher escarpé dominant les quinze milles de largeur du Fleuve St-Laurent, il s'harmonise parfaitement avec ses arrière-plans verdoyants, il possède la grâce d'un château de l'Ancien Temps dominant son vaste domaine.

La fraîcheur de ses murs gris et le lierre coloré, qui monte jusqu'au toit, en font un vrai château de style, que nous pouvons admirer de loin sur le Fleuve St-Laurent.

Ce n'est pas un hôtel, dans le sens propre du mot, mais plutôt le manoir seigneurial d'une immense propriété privée.

Ses chambres ensoleillées sont une réplique de ces anciens châteaux français et renferment les plus beaux exemples d'ameublement conçu par des artisans du Canada Français. Au delà de 2,500 tableaux originaux décorent les différents salons, salle à diner, les chambres privées et les corridors.

Cet endroit estival est unique et probablement l'un des plus exclusifs au Canada. Le Manoir Richelieu et l'espace, qui l'environne, respirent la liberté, la gaieté, le bonheur, et vous rappelle que vous êtes ici sur l'une des plus vieilles colonies de l'Amérique du Nord.

Au Manoir Richelieu, l'amateur de sports trouve une grande variété de divertissements. Prenons le golf, par exemple; découpé dans le coeur d'une forêt sur le versant de la montagne et qui, au dire d'experts, se classe parmi les plus beaux du monde.

Les enthousiastes du tennis trouveront des "courts" qui sont en parfaite condition et où l'on peut jouer une bonne partie. Il y a aussi le bowling, le croquet, le tir à l'arc et une piscine à l'eau salée et tempérée qui entre en rivalité avec le bain de soleil sur la plage privée Lido.

A quelques milles du Manoir Richelieu, les amateurs de pêche trouveront l'endroit de leur rêve, un groupe de lacs privés scientifiquement approuvés de truites vigoureuses.

L'Association Dentaire Canadienne requiert votre présence au Manoir Richelieu, au sein de cette grandeur de la mer et de la forêt calme, parfumée d'odeur de pin et de baume, aussi bien du salin de cette mer intérieure.

Pourquoi tarder plus longtemps à vous inscrire. Donner immédiatement votre adhésion en vous adressant au:

Dr Gustave Ratté,
140 St.-Jean, Québec, Qué.



PAGES EDITORIALES

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PAUL GEOFFRION, B.A., D.D.S., A.I.D.O., F.I.C.D., L.C.D. ARMAND FORTIER, D.D.S., L.C.D.

Rédacteur:

GERARD DE MONTIGNY, B.A., D.D.S., M.Sc.D., L.C.D.
397 est Boul. S.-Joseph, Montréal

Souscription en faveur de l'Université de Montréal

Onze millions de dollars: objectif, qu'il faut réaliser, pour "mettre sur la carte" universitaire d'Amérique, l'Université de Montréal.

Cette campagne de souscription devrait être facile à conduire. Nul canadien de langue française, de bonne foi, ne peut rester indifférent au progrès scientifique et culturel des siens. Tous, dans toutes les sphères d'activités, viennent en contact, profitent, de près ou de loin, du savoir des diplômés de notre Université.

Cette somme, qu'on veut recueillir, servira à solidifier les bases de notre enseignement supérieur; elle donnera à nos étudiants, nos fils et nos filles, un milieu favorable à leur épanouissement spirituel et technique, sur un campus et dans une maison dotés de tous les perfectionnements modernes de détente et de distraction; elle assurera à nos professeurs de carrière une sécurité méritée au crépuscule de leur existence, par l'établissement d'un fond de retraite; elle offrira à notre population, déjà à court de lits d'hôpitaux, un hôpital spacieux et à nos futurs médecins et dentistes des cliniques à portée de la main et dans un centre de recherches médicales; elle fera de ce monument, élevé sur le Mont-Royal, un temple magnifique, dédié au maintien de la culture française, en Amérique, par les améliorations matérielles, qui restent à réaliser à l'intérieur, comme à l'extérieur.

Dans un geste de générosité, les dentistes de langue française de l'Association Dentaire Canadienne, presque tous diplômés de la faculté de Chirurgie Dentaire de l'Université de Montréal, ne doivent pas s'attarder—s'abaisser, allions-nous dire,—à promener un regard critique dans un petit

coin de cette réalisation immense, que constitue une université. Ces diplômés doivent voir grand, embrasser l'ensemble de cette entreprise culturelle et songer que leur contribution n'aidera pas tel Institut, telle Ecole, telle Faculté, mais permettra aux élèves, aux chefs de demain, à se former dans un atmosphère meilleur que celui, dans lequel nous avons étudié.

Nous avons tous reçu beaucoup de notre Université; la formation, qu'elle nous a donnée, nous a servi à réaliser notre devoir de professionnel, de citoyen, de père de famille. C'est quelque chose. Nous avons donc une dette d'honneur, de reconnaissance envers notre Université. N'allons pas croire que nos frais de scolarité ont soldé cette créance: aucune université, au monde, peut vivre uniquement avec les sommes d'argent, qui lui sont versées par les étudiants. Nous avons une dette matérielle, pour ne parler que de celle-là. Cette campagne de souscription nous fournit une occasion—la seule, peut-être—de s'acquitter. Allons-y largement, même s'il en fait mal quelque peu, pour réaliser la devise de notre Université: "Fide splendet et scientia".

Gérard de Montigny.

Les Dents Peuvent Etre Cause de Surdit 

Quelques 10,000,000 de personnes, aux Etats-Unis, sont sourdes ou souffrent du sens de l'ou . Des statistiques montrent qu'au moins 4 sur dix de ces malades ont probablement perdu l'ou  parce que leur oreille interne a  t  bless e par leur mandibule. La cause premi re: malocclusion des dents. Une articulation d fectueuse, souvent, l ve la machoire et occasionne une malposition du condyle dans la cavit  gl noide. Au lieu de glisser confortablement dans cette cavit , le condyle exerce une pression indue sur le canal auriculaire externe, sur la trompe d'Eustache, sur les muscles, les nerfs, les vaisseaux et les autres tissus d licats de l'oreille. Les r sultats sont une d t rioration de la physiologie de cet organe, des  touffissements, des bourdonnements et une surdit  progressive.

Cette constatation  tonnante vient d' tre publi e dans les "Archives of Otolaryngology," par le docteur David J. Goodfriend, orthodontiste, de l'Universit  de Pennsylvanie. Il d clare que—"d'une fa on aussi concluante que Koch a attribu  la tuberculose   des bacilles sp cifiques"—une occlusion d fectueuse d termine quelques vari t s de surdit . Le docteur Goodfriend a remarqu  que des patients, qui se plaignaient de maux d'oreilles, ont  t  soulag s apr s avoir eu leur articulation corrig e. Le m me traitement a aussi "gu ri" des maux de t te, qui parfois avaient  t  diagnostiqu s comme des tumeurs de cerveau, ou du tic douloureux.

Le traitement doit se faire au d but de l'affection. Une correction de l'articulation n'am liorera pas une ou e troubl e, caus e par des dommages dans l'articulation temporomandibulaire. Les adolescents, qui souffrent de malocclusions devraient faire traiter leurs dents par des orthodontistes et les  dent s faire reviser l'articulation de leurs dentiers. Ces traitements sont conseill s dans un but pr ventif.

Nous avons un beau m tier parce qu'il n cessite du savoir, de l'adresse et qu'il comporte des responsabilit s. Il faut que les difficult s rencontr es soient pour nous l'occasion de nous pr parer   supporter mieux les suivantes au lieu de nous laisser d moraliser, parce qu'alors celles qui suivraient nous sembleraient insurmontables.



Courtesy Canadian Steamships Lines Ltd.

Home of the Convention of Canadian Dentists, June 20th to 24th, 1948

◎ The above is the swimming pool at Manoir Richelieu at Murray Bay where all dentists meet next June. Everybody will want a dip following sessions, or after tennis, golf, or riding. The St. Lawrence contributes salt water—warmed and shimmering like a flawless emerald set in glistening tile. The pool is yours during the convention to enjoy a refreshing swim, while the connecting sand beach is ever an invitation to sun bathing.

*"The heights by great men reached and kept
Were not attained by sudden flight,
But they, while their companions slept,
Were toiling upward in the night."—Longfellow*





DR. H. BADEN POWELL

Calgary, Alberta.

Alberta Representative, Board of Governors, C.D.A.

Member of Board, Alberta Dental Association.

President, Alberta Dental Association, 1946-47.

Past President, Calgary Dental Society.

Graduate, Faculty of Dentistry, University of Toronto, 1928.



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MEDIAN ANTERIOR MAXILLARY CYSTS

by GEORGE A. MORGAN, D.D.S., Toronto, Ontario.

PROBABLY the most commonly misinterpreted diagnostic problem to be found in the anterior maxillary region is that of the median line cyst. This is due in part to the fact that dental literature contains few, if any references to the condition prior to 1931 when Meyer of Stanford University described his findings, basing his conclusions on a study of hundreds of cadavers sagittally sectioned. Stafne of the Mayo Clinic later reported a series of Median Line Cysts disclosed in connection with supernumerary anterior central incisors. Later this same author along with Austin and Gardner wrote at some length on the subject.

Since these papers are found in the Journal of the American Dental Association and therefore are not available to the vast majority of Canadian dentists, this summary is written in the hope that this condition will be more widely recognized, thereby saving many anterior teeth which would otherwise be sacrificed. Some author's personal observations and cases are recorded as illustrated.

Median Anterior Maxillary Cysts are situated in the incisive canal and their incidence is not less than one in every hundred. They are supposedly derived from epithelial remnants which persist in the interincisive region. Pathologic sectioning will reveal that their lining membrane is ciliated, transitional and squamous epithelium, demonstrating that in part at least, they belong to nasal structure.

The majority of Median Line Cysts lie well within the anterior palatine canal and it is therefore difficult to distinguish roentgenographically between them and the anterior palatine fossae. When these cysts are displaced laterally as is frequently the case in roentgen rays taken in the anterior lateral position, they may be superimposed over the lateral incisor roots and thus be mistaken easily for a radicular cyst. Median Line Cysts which



FIGURE 1
Dentigerous cyst about two impacted supernumerary central incisors.



FIGURE 2

Occlusal ray of large median line cyst. Anterior teeth have needlessly been removed, because of this cystic condition. Note median line suture bisects cyst.



FIGURE 4

Photograph anterior region of Fig. 3. One year after enucleation of cyst. Note normal colour of teeth.



FIGURE 3

Occlusal ray of large median line cyst. Note that median line bisects cyst.



FIGURE 5

Twin median line cysts. Note that both of these cysts lie partially over the median line.

are limited in size are considered to be without clinical significance. Frequently, however, the Median Line Cysts will become infected, enlarge, and breaking down the walls of the anterior palatine fossae, invade the palate. Probably some of the large cysts of the maxilla whose aetiology is obscure

should be thus classified. In many instances they have been known to exert sufficient pressure on the anterior palatine nerve to produce considerable pain.

There is no doubt that dentigerous cysts develop in association with supernumerary central incisors. Fig. 1. The presence of a supernumerary tooth and a large cyst in the anterior part of the maxilla is not conclusive proof that the cyst is dentigerous. In some instances, Median Anterior Maxillary Cysts continue to grow and encroach on or develop around supernumerary teeth, the presence of which is merely coincidental.

Probably the best aid in roentgenological differential diagnosis is to observe the condition in an occlusal ray, rather than depending entirely on the customary intra-oral dental ray of the maxillary central incisor region. Median Line Cysts will generally be observed to be spherical and divided by the median line suture as illustrated in Fig. 2. This will be found to be in strict contrast to cysts or infected areas about centrals or laterals which have a tendency to be observed on either one side or the other of the nasal

spine. In many instances, two separate cysts are found, one on each side of the mid-line as illustrated in Fig. 5. Frequently one is able to trace in the dental rays of the anterior region, the intact periodontal membrane around the anterior teeth, thus eliminating the suspected teeth as the aetiological factor of the Median Line Cyst. Cysts are more easily recognized in the edentulous jaw and may prevent a protuberance on the alveolar ridge and cause localized or referred pain in the anterior region of the maxilla due to nerve pressure internally from the cyst and externally from the denture.

Anterior Median Line Cysts for the most part have no connection with the anterior teeth and since the removal of these cysts via the palate is the method of procedure, it is seldom necessary to remove the teeth. Fig. 3. A post-operative photograph Fig. 4. of Fig. 3. showed no tooth colour change one year after enucleation. Cysts are enucleated from the palatal side generally without undesirable post-operative results. The cavity formerly occupied by the cyst may fail entirely to fill with bone or may partially fill in.

It has been shown in rats that a diet qualitatively as well balanced as possible but insufficient for rapid growth promoted longevity and postponed the changes associated with old age. This, of course, is in keeping with the greater "expectation of life" of middle-aged people who are slightly below the average weight. Are we, then, wrong in providing (or attempting to provide) for our children a diet which not only contains the essential nutrients but is so generous in quantity that it induces rapid growth? A high-fat high-carbohydrate intake (which is in fact provided by any ordinary high-caloric diet) is by no means an unmixed blessing—it is no new idea that overfeeding may be a factor in the causation of diabetes, and various facts support the idea. Much evidence relates arteriosclerosis to an excessive intake of fat and, especially, cholesterol; and there are data suggesting that the same factors may be concerned in the production of arteriosclerosis in man. Evidently research on the nutritional environment appropriate to maturity and old age may do much to diminish the incidence of serious metabolic disorders in older people, besides, in due course, contributing to our knowledge of the fundamental processes of growth and ageing.—C. P. STEWART, M.Sc., Ph.D. Univ. of Edinburgh.

"Who knoweth whether thou art come to the kingdom for such a time as this."

—Mordecai to Esther.

Problems in Oral Diagnosis and Treatment Planning Through the Later Years of Childhood*

by JOHN HADDIN BARR, D.D.S., B.Sc. Dent.†

THE discussion of problems arising in the dental care of older children concerns an age group which by common inference tends to lie in a "no man's land" between dentistry for children and the treatment of the permanent dentition. Throughout the period in which the deciduous dentition is being discarded and replaced, oral problems merit special attention. It is the age range in which decisions must be taken which will prove irrevocable, yet which determine in large part the future of the permanent dentition. This requires specifically that decisions in oral diagnosis and treatment planning be soundly based. It is also important that a definite program be established for the continuing care of the emerging permanent dentition. It will not suffice to improvise from time to time through later years; nor may delay in the establishment of a long range treatment plan escape resolving itself into a counterpart of "closing the stable door after the horse has fled."

Prerequisites for rendering oral health service at this time are that the practitioner be well versed in normal developmental changes and alert to recognize pathologic conditions and aberrations in growth. To many of the problems liable to be present we have not desirable answers; but it should be helpful to consider the nature of some which are commonly encountered, their recognition or diagnosis, and the measures by which they would appear to be dealt with to best advantage. There is room for conflict of opinion on some principles and in some individual instances; but the material to be pre-

sented at least conforms to a practical concept holding promise of successful oral health service for older children.

It is not reasonable in the face of wide individual yet normal variations to attempt specific definition of the group under consideration, in terms of a range of chronologic ages. Their physiologic age range covers the years through which the deciduous dentition is replaced and the permanent dentition completed save for third molar teeth. Attention will be directed particularly to the years associated with and following the shedding of deciduous molar and cuspid teeth.

Upon what should our philosophy of dentistry for these patients be based? What may we really hope to achieve for children in this group, as distinct from an ideal concept which we should also keep in sight? What factors will most crucially affect hopes for the realization of our philosophy in terms of practice? How may we best direct our services toward that same end? We will do well to relate our efforts primarily to what we know to be possible of achievement for virtually every young patient, namely to so control dental disease and oral deformity that each may reach adult life with a healthy, functionally efficient and pleasing dentition. This may not satisfy those who expound with enthusiasm the ideals of prevention; it will prove, however, to be more nearly related to a practical approach to the problem, holding very real promise of success. We can view it as a worthy if modified ideal which takes due notice of practical limitations. And in seeking to apply ourselves to

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†Division of Oral Diagnosis, Faculty of Dentistry, University of Alberta.

the task outlined, we will not overlook the valuable assistance possible through preventive therapy.

What factors characteristically influence or affect the dentition through these years? The period is not one of rapid growth in the sense of a general increase in size of the jaws, contrary to a concept widely held. There are localized areas of growth activity—resulting notably in the establishment of greater vertical dimension through increments of alveolar bone and condylar growth as permanent teeth erupt, and in extension of the jaws posteriorly to accommodate second permanent molar teeth. But the trend conforms to that of general physical development, in which this age range appears as a period of consolidation, with a slight and transient acceleration in growth toward the end of the period, during the year before puberty. It is also an age of psychologic stability which follows the initial period of active emotional and behaviour development; it precedes a period in which the finer and higher emotional patterns make their appearance to indicate the threshold of maturation of the individual. If it is an age in which there is a slowing up in growth, it is nevertheless an age of great change in the mouth—and it is well to remind ourselves that at no time in the life of the dentition does a state of dynamic change fail to persist though change may become so gradual as to be almost imperceptible.

It is not a period in which many obscure lesions are evident in the mouth—at no time are these more occasional. For all that, at no time is the challenge in oral diagnosis and the planning of treatment greater, and the period abounds with pitfalls for the unwary. Caries incidence is sharply reduced—but not so is caries activity or perhaps more correctly, susceptibility. Caries is only less apparent, for the obvious reason that during the change in dentition the number of susceptible surfaces is re-

duced temporarily, and the forces of caries have had little time to attack newly-arrived teeth. They are aided subtly and unostentatiously by a natural craving for carbohydrate fuel to sustain the intense physical activity of these years. In our civilization this manifests itself in the form of a craving for candies and soft drinks for which, once the child's environment has widened from the home circle into school and club activities, there is new opportunity as every parent knows. It is in general, the ideal age for orthodontic intervention or assistance toward the final perfection of oral development, and it is the ideal age for the encouragement of good habits of oral hygiene, for which motivation can be secured on a more intelligent plane backed by appeal to the emerging and more complex emotions such as pride.

If the prevailing dental problems are not in the form of obscure and rare lesions, they are no less difficult of solution and call for conscientious deliberation. At younger age levels one can often temporize with some justification — “watchfully awaiting” the evident development of growth trends. But not so at this time; it is not only the ideal time for the active encouragement of ideal functional and aesthetic conditions in the mouth, but it is the latest time. Postponement of decision or action must from this time onwards prejudice the prognosis for any corrective treatment, and he who follows this course assumes a grave responsibility. It is the time at which one must make the irrevocable decisions which in his wisdom he judges best, and act accordingly. No one of us is not sometimes humbled by inadequacy to meet the situation. To our aid we need to bring thorough techniques of examination on which to base a diagnosis as reliable as possible; in vital problems of treatment planning we must draw on the lessons of our experience to the full, adding what we can learn from the

wider cumulative experience of our colleagues. Our basic teaching, alert observation of personal experience, and critical evaluation of the findings of others combine to provide little enough background for the judgment called for in treatment planning.

BASIC ORAL EXAMINATION FOR DIAGNOSTIC STUDY

From a growing list of techniques having application in oral diagnosis there are four which comprise an absolute minimum for adequate study of cases falling within the physiologic age range under consideration. I know these stand out in contrast to the single mirror and probe examination customarily afforded our older children as patients. But I am convinced that these children will never experience true oral health service until and unless diagnosis is based upon at least (1) a case history and subjective report (2) physical examination of the mouth (3) radiographic findings and (4) study casts, as a routine in conjunction with really efficient regular recall arrangements.

The introduction of a case history and subjective report as routine serves to disclose valuable information—often unexpectedly—which is not otherwise available. This procedure need not always be exhaustive but should in each case embrace systematic enquiry into the family medical history, the prenatal health of the mother, the history of the health of the patient, and infant feeding; history of the eruption, number, condition and occlusion of the deciduous teeth, eruption times of permanent teeth, accidents and injuries to the mouth, history of habits affecting the dentition, and history of dental treatment. The subjective report should record information as to present health and vitality, dietary, any oral symptoms, habits persisting, and home care of the mouth. Pursued systematically with the aid of a suitably designed form or chart, the preparation of a

case history and subjective report is not, if I may anticipate objection, time-consuming.

The searching nature of both physical and radiographic examinations for caries needs no further emphasis in the light of an earlier discussion. This is but one objective of examination; the broad field of oral examination must include specific study of the development of the dentition through these years. At least once during the period under review, the scope of the x-ray examination must be widened to include a full periapical type of survey. And in studying the development of the dentition, the preparation of casts is essential at not less than yearly intervals. This cumulative record, in conjunction with the charts and films recording the successive physical and radiographic examinations, provides the only way in which developmental trends culminating about this time can be clearly seen and recognized. Gnathostatic casts may be desirable, but simple casts which may be correctly occluded to reproduce the relationship in the mouth are a minimum requirement. These four examination techniques form a basic routine to which other special examinations may require to be added, e.g., caries activity tests; medical and specialist consultations may also be indicated.

Given an adequate diagnostic study, the problem of treatment planning will resolve itself into the prescription of the right treatment at the right time, together with establishment of a definite program for oral health service visualizing the general form of care through many years ahead. There are interesting general considerations in the planning of treatment which cannot be covered here, e.g., the use of local anaesthesia in restorative work, how much restorative work should be attempted at each visit, and so on; and discussion of the value of continuing care in which regular recalls is another

important feature. In directing attention rather to some specific problems in oral diagnosis and treatment planning of interest in general practice, it is convenient to group these under headings of developmental abnormalities, the prevention and control of caries, and planning for the management of some of the casualties which may befall the dentition.

SOME DEVELOPMENTAL ABNORMALITIES

Many of the developmental abnormalities will demand the specialized judgment and skill of the orthodontist for their correction; and it is important that the general practitioner should be aware of his personal limitations in approaching this field. To most patients orthodontic service is not yet available, frequently for reasons of location or economics. Any practitioner who genuinely interests himself in developmental studies can confidently set about intelligently planning treatment for those cases in which the diagnosis is reasonably clear, and which do not demand intricate mechanical devices for their treatment.

Let us hope the time has passed when the correction of malocclusions automatically called for the retention of a full complement of 28 or 32 teeth. Surely the fundamental consideration is not the number of teeth contained within the arches, but assurance of good arch form, occlusal relations and function, and satisfactory aesthetics. Let us also hope that the time has passed when all dental arches were theoretically required to conform to one standard pattern; for if we recognize wide variations in bodily physique and build and stature as being normal, then to require a common arch form for dentitions within differing facial types is as futile as an attempt to fit square pegs into round holes. Within reasonable limits, the number of teeth and the convergence toward Hawley predetermined arch form are of no consequence.

Again, what is important is the relationship of teeth remaining in the arches, their contact relations, occlusal relationships with opposing teeth, harmonious relationships of jaws and dentition to the face and cranial structures, and the stability of the end result—and all of these factors should harmonize with considerations of oral hygiene, masticatory efficiency, freedom from traumatism, facility for clear speech, and pleasing aesthetics.

Two recent trends are notable—agreement on forward drift of teeth as being responsible for many malocclusions, a premise so ably championed by Grieve of Toronto; and the desirability of conforming treatment planning to the concept of keeping the long axes of teeth within the arch form indicated by the location of their apical bases. If forward drift has occurred, and it nearly always has, in cases of malocclusion, then it may be difficult if not hopeless to attempt to move teeth distally again; it may be simpler and more logical to remove selected teeth in compensation, at the same time eliminating cause for continued forward drift. And if the arch outline as determined by the apical base is small, and the teeth too large to be accommodated within it, it may be logical to remove teeth so that those remaining may be directed into positions in which stability is more likely of achievement.

Here at last heredity attains recognition as a factor in malocclusions long apparent to the observant if less scientific practitioner. For to quote a familiar example, there is no reason why through heredity a child should not derive small bony jaws from one parent, disproportionately large teeth from the other, or vice versa. It is futile to ignore such possibilities in planning treatment. At the risk of contradiction I venture to suggest too that many cases of misplaced incisors, particularly rotated incisors, are heritable manifestations; and I do not

hesitate to add that where hereditary forces are suspected of causing any given type of malocclusion my experience has indicated a relatively poor prognosis for treatment. Incisors such as those referred to can of course be placed in "normal" positions—but they are very unlikely to remain so, showing strong tendency to revert to what appears to be their hereditary dispositions. Considerations of hereditary influences the apical base and forward drift should detract from the traditional concept of arch "expansion" to accommodate a whole complement of teeth, so long presented as the only ideal which could satisfy the professional pride of the orthodontist. We have come to appreciate rather belatedly some factors in the failure in retention of numerous cases in which arch expansion has been the rationale of treatment — and, often enough, unnecessary impaction of third molar teeth the end result.

The observation of mandibular development in cases of cleft palate in the absence of occlusal function tempts one to question the validity of emphasizing environmental influences too far. In these cases mandibular teeth do not appear to erupt beyond a normal height, nor are they characterized by an unduly high incidence of malocclusions of the type usually ascribed to lack of functional development. Perhaps intrinsic growth factors deserve more attention than they are given, whether they be of hereditary, endocrine or other origins—and this statement can apply nowhere more forcefully than in the planning of treatment. Powerful, perhaps slow, but continuously active, these forces may neither be diverted nor arrested more than temporarily by mechanical intervention.

The forces acting upon a forming dentition as disclosed by developmental trends will best be comprehended by continuing study of a case. Malocclusions do not lend themselves to empirical diagnosis and treatment,

and more than in any other field of dentistry the rationale of therapeutic procedures is inseparable from an understanding of causative factors. From a time much earlier in a child's life than we are for the moment considering, routine (say annual) study casts and radiographs can provide a better background for diagnostic study of developmental aberration than is usually available. Such serial records will aid in the differentiation of individual variations intrinsic in origin from environmental mutilations more amenable to correction. They will aid in intelligent decision as to the time at which intervention or mechanical assistance to growth trends will be most beneficial, whether this responsibility falls to the dentist in general practice or the orthodontic specialist, to whom such records would be a veritable godsend.

What is the ideal age for orthodontic treatment? With some exceptions I feel that anything short of a very gross mutilation is best treated through the years when the main change is taking place from deciduous to permanent dentition. Any mechanical difficulty inherent in the use of appliances at younger ages is irrelevant, and should be viewed as no more than a problem in mechanical skill and ingenuity were the treatment desirable earlier. I do not feel, however, that we can be sure that the correction of deciduous tooth relationships will appropriately influence those of the successional teeth. Prior to the transitional stage treatment is better directed energetically toward the removal of causes for any developing malocclusions—the correction of abnormal habits, the elimination of mouthbreathing, the maintenance of an intact deciduous dentition, and so on.

In pressing the last point we may be skating on uncomfortably thin ice. We are always ready to attribute malocclusions to loss of contact relations in the deciduous dentition; but in

doing so we should perhaps hold tongue in cheek, for do we not regard normal development of the deciduous dentition as a condition in which all the teeth have become spaced, save for the close contact of the distal surface of the second deciduous molar with the approximating first permanent molar tooth? In this exception we can find the one clear case for space maintainers—that is, in the case where there is premature loss of a second deciduous molar tooth. In instances involving other deciduous teeth, there is good reason to record carefully the space present at the time of loss of a tooth, and to delay construction of a space maintainer until, but not later than, any tendency toward closing of the space becomes perceptible.

Experience has shown that hasty arch expansion is not necessarily indicated just because mandibular lateral incisor teeth erupt lingually. That is perfectly normal, and many times natural growth is all the treatment that the condition awaits. Failing this, if careful study of the apical base, the size of teeth and other relevant factors should indicate corrective treatment, this should in any case await the 9-11 year period giving better opportunity for coordination with the treatment of any other correction needed.

Spaced maxillary incisor teeth, whether or not associated with abnormal frenum labiorum, should never receive treatment until the permanent cuspid teeth are erupting. Often this physiologic force is sufficient by itself to close the teeth together, and usually to bring about elimination of the so-called abnormal frenum—which could possibly be in some cases a result rather than a cause of the spaced central incisors, to judge by its apparent ready disappearance when these teeth are approximated. If treatment is required to correct spaced central incisors, the forces exerted by erupting cuspids

provide the only sure retention and treatment should be timed accordingly.

Individual maxillary incisor teeth may erupt in a lingual relationship to the anterior mandibular teeth, and this condition does demand, other things being equal, simple and prompt treatment preferably before the maxillary tooth has erupted sufficiently to become locked in this relationship on closure. An inclined plane of clear acrylic resin, cemented over the mandibular teeth, will surely guide the maxillary tooth or teeth to correct position, and the corrected occlusal relationship automatically takes care of retention.

Removal of selected teeth is quite sound practice provided the diagnostic prerequisites are satisfied. Sometimes we see first permanent molar teeth impacted behind and beneath the contact point of deciduous second molars. If it is not possible to tie a wire pressure loop between the contacts, there is a case for removal of the obstructing deciduous tooth and the placing of a space maintainer to guide the permanent tooth as it erupts and to prevent its drift further mesially. Any attempt to return it distally will tend to impact in turn the second permanent molar tooth, almost certainly the third molar. If insufficient space in the arch follows from the position of the erupted first molar tooth, it may be more intelligent to plan for later compensatory removal of a permanent first or second bicuspid as it erupts.

Judgment in sense of timing is the important factor in removing any permanent teeth to compensate for lost space—a sense of timing plus foresight in the form of an immediately inserted space maintainer to prevent undesirable forward drift until the space obtained by removal of any tooth has been utilized in whatever manner was planned. The ideal time for removal of a permanent tooth is usually as soon as it appears

through the gums—removal of such teeth prior to their eruption is unnecessarily unpleasant for young patients and should be avoided as far as may be reasonable.

When there is insufficient space for an erupting cuspid tooth so that it is forced into labioversion, removal of the first bicuspid may provide one of the most dramatic illustrations of simple and efficient treatment. This must be limited to cases in which cuspid teeth heading into labioversion present at the same time a mesial inclination from root apex to the crown, and should generally speaking be carried out bilaterally. No appliance is likely necessary other than a removable space maintainer for nighttime wear, designed to prevent forward drift of the second bicuspid tooth until the cuspid has occupied its position. But this treatment would be quite as dramatically unsuccessful applied to the case of a cuspid in labioversion through lack of space in the arch, but presenting a distal inclination from root to crown. In this type of case there is no simple answer, and it will challenge the ingenuity of any orthodontist. The temptation to remove the lateral incisor is at times strong, but seldom holds promise of a happy result aesthetically.

Congenitally missing lateral incisor teeth produce an unfortunate aesthetic disability, often not too amenable to treatment no matter how carefully planned. Routine radiography assures the earliest possible indication of this eventuality, giving opportunity to plan appropriate and sufficiently early treatment.

There is no simple and effective treatment for the large group of cases visualized by Angle Class 11, Division 1. My experience has been that these are best treated as the dentition is changing; it has also been that they call for the use of intricate mechanical devices, one of the older types utilizing a form of Baker's anchorage

being conspicuously useful. Prospects for both treatment and retention in some of these cases may be enhanced by removal of maxillary first bicuspid (only), preliminary opening of the bite, and the institution of nasal breathing encouraged by the use of some form of mouth screen. Favourable conditions are thus prepared for the retrusion of the maxillary anterior teeth and the correction of the distoclusion. However, the response to preliminary opening of the bite and to procedures for correction of distoclusion is remarkably unpredictable and shows amazing variation in the time factor involved. Mershon has pointed the way to the more reliable prediction of possibilities for bite opening.

CARIES PREVENTION AND CONTROL

Developmental abnormalities are in a sense the most urgent problems of this age group, but they claim no monopoly of professional attention. Dental caries, true to form, is an ever present problem. With a new dentition in the making it is time to plan specifically for its conservation, and each individual case presents its challenge and its opportunity.

At this age one can hope to enlist intelligent cooperation in oral hygiene. I am convinced of the value of tooth-brushing—in conjunction with a dentifrice. I am convinced too, but not comparably optimistic, having due regard to human nature, as to the value of dietary reform. I believe we should seek cooperation in both directions. I will not venture into the field of dietary recommendations for there is difficulty finding common ground for agreement; and in any case my own experience has not been too encouraging. In fact I have retreated to the point at which I will venture nothing more than to recommend a balanced diet, low in refined carbohydrate, and containing plenty of crisp, tough or fibrous detergent foods designed to mechanically cleanse tooth surfaces during mastication, and to

exercise the jaws. But of toothbrushing there is something more definite to be said. There is the apt analogy of sweeping out the cracks in a cobblestone path, for which one would naturally use a small brush and follow the crevices. The primary object in toothbrushing is comparable—to clean the interdental spaces and gingival-crevice regions which do not receive adequate natural cleansing during mastication and speech. For this purpose the use of a small toothbrush designed to brush one tooth at a time is recommended, and it should be employed with a rotary motion. Special attention should be directed to two commonly neglected regions—the buccal surfaces of the most posterior maxillary teeth, and the lingual surfaces of their mandibular counterparts. A dentifrice, preferably in powder form, is a valuable aid; it is no more logical to attempt hygienic care of the teeth without a dentifrice than it is to advocate skin cleansing without soap and water. And the mouth must be thoroughly and vigorously rinsed after brushing; after all, brushing can only free debris from the teeth, and it is equally important to remove it from the mouth. The time for brushing is also an important consideration. Periodic prophylaxis by the dentist assists in caring for areas not readily accessible to the toothbrush. Green stain, common at this age, is amenable to repeated prophylaxis, and once removed is unlikely to recur.

Immunization of tooth surfaces to caries is very much in the limelight at present. Fluoride therapy appears to have certain value, but there is need for more extensive and better controlled observations over longer periods before its possibilities can be accurately assessed. Properly carried out, it is not attended by risk and should be considered at this stage for routine application to anterior teeth. My own experience dictates a preference for the use of ammoniacal silver

nitrate as being more effective in caring for smooth surface areas where caries is liable to occur or may have just started attack; but its use is customarily limited to posterior teeth. Silver nitrate solutions do not seem to be effective against pit and fissure cavities. If these are susceptible, odontotomy is definitely indicated, preferably with gold foil as the restorative material.

The basis for the management of caries remains, as we have shown, in an earlier paper, its control through early diagnosis and restorative treatment. It would appear that with existing possibilities for diagnosis of proximal caries, pit and fissure caries may be regarded as the more difficult of diagnosis, inviting the development of more efficient examination techniques in this direction.

Arising from a current study of findings as to the incidence of proximal caries, there are one or two specific points of interest. After the eruption of first permanent molar teeth into contact with the deciduous second molars, new sites of susceptibility for proximal caries have come into being. The noteworthy and relevant finding is that there appears to be a clear tendency for proximal cavities to arise first on the distal surfaces of second molar (deciduous) teeth, later on the approximating first permanent molar surfaces. The value of diagnosing and restoring a distal cavity on the deciduous molar wherever possible before any carious lesion is encouraged on the permanent molar should be therefore evident; efficient and prompt treatment in this way, in conjunction with silver nitrate immunization therapy on the mesial surface of the first molar, promises to obviate many mesial cavities on the latter, at least through this period.

A current study of young adults supports earlier work by other investigators that proximal cavities tend to display bilateral symmetry; and this known tendency has considerable back-

ground value in the examination for these lesions. The total caries experience of each proximal surface has been studied separately, from which the important fact emerges that caries experience of approximating pairs of surfaces is almost identical, while there is not necessarily any relationship between the experience of mesial and distal surfaces on a given tooth.

Treatment planning for the control of caries is a vast subject in itself and comment can be offered on but a few points. So-called simple "spot" proximal restorations, if indeed they merit description as restorations, cannot be condemned too thoroughly. Findings from a study of mixed dentitions show that caries recurred with twice the frequency when such short-cut methods had given preference to conventional 2-surface restorations. This is not difficult of explanation. Excepting only the most occasional and favourable circumstances, accessibility is inadequate, there cannot be any certainty that all caries has been removed in preparation, proper retention form is impossible, and extension for prevention—a well tried principle—becomes a mere mockery. In no case where there is less than a full half-inch between the surface involved and the tooth next in the arch can this procedure be attempted with safety; and in these cases, simple "spot" fillings are still contraindicated if another tooth is still to erupt in approximation. It does not call for much imagination to visualize the rarity of genuine indication for this short-cut technique. Zealous consideration for the preservation of intact natural marginal ridges is a misguided excuse, for more often than not such procedure threatens greater extensive ultimate loss of tooth tissue through liability to recurrent caries. The opportunity for choice between sound practice and short-cut restorative methods is never more frequently present than during the period of replacement of the deciduous dentition.

Planning the location for gingival margins in proximal cavity preparations is a question which has been revived lately, after an almost unquestioned acceptance of Black's recommendations over a half century. Location of the gingival margin within the crevice is not disputed as an ideal state of affairs, but it can be no better than a transient arrangement. For it is now recognized that eruption does not cease abruptly when a tooth assumes its position within the arch, and that the gingival attachment moves progressively rootwise along the tooth through life. In proximal cavity preparations there is in any event, the physical impossibility of reconciling a flat gingival floor with a curved line of gingival attachment. Other observations on the nature of proximal lesions offer a better basis to recommendations for location of gingival margins. The one important principle would seem to be that these margins should always be located well clear of the contact area in a gingival direction.

The selection of restorative materials will vary with individual operators and with the circumstances of each case. A measure of choice is open in many circumstances. It is fine to generalize by maintaining that the result possible in a mouth restoration through the use of technically perfect gold foil and inlay restorations cannot be matched; but that is not to imply that limitations imposed by the objective of effective tooth conservation cannot allow wider scope in the selection of restorative materials.

Silicate cements have unfortunate and well-known deficiencies, but they have a place in restorative dentistry. In planning to use them where there is an appropriate indication, two reservations must be made in the interests of tooth conservation. They should be used *only* in association with a zinc cement base or lining—not cavity varnish—and the cavity preparation should be so designed

that, recognizing the defects of the material, the contact area is avoided if possible.

Sometimes a young patient appears with rampant caries overtaking the teeth of the permanent dentition almost as it is taking shape. These cases may impress one at first sight as hopeless, but I have satisfied myself that painstaking search for carious lesions and their prompt restoration, even though a multitude of cavities and restorations be involved, will usually be rewarded by successful conservation of the dentition if associated with vigorous measures of oral hygiene. In numerous cases the obviously high caries susceptibility appears to be a transient phenomenon, a phase through which the young patient passes to emerge on less disastrous times for the dentition.

Confronted with advanced caries in one or more first permanent molar teeth some operators advocate bilateral extraction, usually both maxillary and mandibular. It is difficult to perceive good reason for this, and I prefer to dispose of each first molar tooth on its own merits. I admit to one exception, those cases in which removal of three of the four first molar teeth is viewed as unavoidable. In that case one may be justified in contemplating the removal of all four. It is important where the extensive restoration of a first permanent molar tooth is concerned, while always reminding oneself of its unusual value in the arch, to try and anticipate its probable future history, visualizing the prognosis say for ten years ahead. For disastrous as it may be to remove a first permanent molar tooth in a child, it is not as disastrous as its loss from a more mature permanent dentition. Especially in the maxilla the second molar tooth can be expected to move into the first molar position and maintain the integrity of the arch, provided opportunity for this is not delayed beyond the time for the appear-

ance of the second molar tooth into the mouth.

A legacy from inadequate treatment planning in care of the deciduous dentition may manifest itself when a permanent tooth erupts into the mouth with an unevenly discoloured crown showing superficial pitting and irregularity of contour. This form of damage to the enamel usually follows from a periapical infection about deciduous teeth—an untreated abscess or "gumboil", or an unfavourable reaction to pulp therapy in the deciduous predecessor. Zeal for the retention of deciduous teeth can be carried too far; and in the case of affected anterior teeth this solicitude is aided and abetted by the understandable vanity of fond parents. I feel that pulp therapy in deciduous teeth is contraindicated very definitely in the presence of dead pulps or existing periapical infection. It should be limited to the capping of vital exposed pulps in deciduous teeth, and their continued vitality should be checked from time to time so far as one is able. A space maintainer in the deciduous dentition is preferable to a damaged and unsightly successional tooth, which through delayed eruption and deflection may also assume an abnormal position. The problem need not of course arise given proper care of the deciduous dentition, apart from circumstances of accidental oral injuries.

CASUALTIES

Likewise there should not be need for discussion of pulp therapy in young permanent teeth. Here again there is at least the ever-present hazard of accidental injury involving removal or death of the pulp. When this happens to older children, treatment planning is difficult and I see no satisfactory general answer. To the shortcomings of the rootfilling technique under the most favourable circumstances, there is to be added the complication of immature root formation and open apical foramina. There

seems little choice other than to fill the canal and await the reaction, relying on the incomplete radiographic picture as the only means of observation. In the event of a subsequently unfavourable report one can still resort to root resection with considerable hope of success, and for this operation at no time is there a better prognosis than in young adolescent patients. Accidental fracture of a tooth may force consideration of the above problem. But where a young permanent tooth becomes fractured, any possibility for conserving the vitality of the pulp should be explored. The less extensive crown fractures which may expose a pulp without laceration or causing haemorrhage, or those involving near exposures, invite the postponement of further irritation through operative measures other than to provide immediate protection. This may be simply devised in the form of a pinch band fitted to the tooth and projecting incisally beyond the fracture, to contain a sedative paste against the irritated pulp, in turn covered by a protective hard cement. In teeth where root formation is still immature, the pulp displays remarkable recuperative powers if given a chance. That chance is enhanced by this postponement of operative irritation, and the expedient referred to, while unsightly for the time being, may permit survival of a vital pulp and later restoration of the tooth with a far better ultimate prognosis than one could ascribe to a rootfilled tooth.

Operative irritation in restoration of lost dental tissue, whether through accident or pathologic defect, is at its extreme in the preparation for jacket crowns. If these should be indicated, their immediate construction must not be undertaken. It should be delayed until normal pulpal recession has removed the pulpal cornua from superficial proximity to the necessary field of operation, and from chemical irritation arising through the com-

monly used silicate types of cementing media.

Accidents to the dentition may produce the tragedy of partially edentulous mouths, a problem more baffling than ever. Fixed partial restorations are contraindicated for their construction is open to the same objection as that noted for jacket crowns with an added factor of immature root formation in abutment teeth. It is also difficult to justify the rigid and unyielding restriction of the last stages of active growth of the jaws which would be imposed by the insertion of tooth-borne precision-type cast partial dentures. This leaves the reluctant choice of a tissue-borne temporary plastic partial denture, which should have a minimum of retentive attachments — none at all if possible. Unusual attention to oral hygiene will minimize any likelihood of damage cervically to teeth, or to tissues of attachment, but any such device is to be considered as purely temporary until mature development permits its replacement.

CONCLUSION

This review of problems in oral diagnosis and the planning of treatment through the later years of childhood is not intended to be complete or comprehensive. But it should serve to indicate the nature of these problems and the implied demand for very searching observation, sound judgment, timed action, and foresighted planning. It is but one instance illustrative of the role of our newly-found scientific discipline—oral diagnosis and treatment-planning—in dental education and in dental practice. To it we look for the encouragement of a broader approach to oral problems, in which all the scientific findings and therapeutic techniques of dentistry may be correlated as never before, and in which the attention may be concentrated above all on a properly balanced health service visualizing the whole mouth as a complete but not

independent unit of general bodily function. So in considering these older children we have sought to note their oral characteristics under modern environmental conditions, to evaluate realistically some selected therapeutic procedures from various fields, and to consider their application according to individual variations and needs.

Above all, we have to recognize the far-reaching consequences of our approach and the imperative need for foresight implemented by a definite program for continuing care through adolescent years. No matter how wisely, how ably we apply ourselves to meeting the oral problems of late childhood, our efforts will be in vain unless coupled with longterm planning for continuing oral health service. There are still other professional responsibilities. In the attainment of the objectives considered we must depend in part upon the encouragement of enlightened cooperation by children and their parents. And we

cannot be too conscious that the lay parent who entrusts his family to our professional care is not in a position to himself appreciate or evaluate at once the exact level of professional service they receive. Time will inexorably reveal to parent and dentist alike how honestly and well, or how inadequately, professional responsibility has been met. Dentistry for older children calls for sustained, thoughtful, conscientious and skilful effort. In this thought lies the prerequisite for the encouragement and the sense of satisfying achievement which will truly enrich our professional careers in retrospect; and only through such effort will our contribution to the welfare of human society be realized in this field.

BIBLIOGRAPHY

- Arnim S. S.—*J. Dent. Research*, 21: 243 (June 1942)
 Barr John Haddin—*J.C.D.A.*, Dec., 1947.
 Blackwell R. E.—*J.A.D.A.* 29: 196 (1942)
 Grieve George W.—*Am. J. Orth.* 30: 437 (Aug. 1944)
 Manley E. B.—*Dental Record* 64: 75 (1944)
 Merzhon J. V.—*J.A.D.A.* 26: 1972 (1939)

Conditioned food habits based upon biologically irrelevant traditions, prejudices, fashions, prestige symbolisms, and advertising slogans or programs unfortunately govern most of us in our choice of food.

How can the medical, dental, and allied professions become effective in combating the serious effects of malnutrition on public health?

1. *We should interest ourselves in the soil, its fertility, its replenishment and conservation.*
 2. *We should concern ourselves with the problem of water conservation.*
 3. *We should educate our patients to insist upon buying natural foods rich in nutritive essentials, and to refuse to buy highly processed food commodities low in nutritive content. As practitioners of health service we could be instrumental in promoting an effective consumer boycott of those foods that are inimical to general and oral health.*—N. PHILIP NORMAN, M.D., New York, in *Am. J. of Ortho. and Oral Surg.*
-

Joe was dead, and John called on the widow to express his sympathy. "Joe and I were mighty close friends," John said. "Isn't there something I could have to remember him by?"

Tearfully she raised her eyes and whispered softly, "Would I do?"

The Gottlieb Method for Prevention of Decay and Cavity Treatment

Some Suggested Improvements

by DR. MARK ZIMMERMAN, Toronto, Ontario.

THE "GOTTLIEB METHOD" of prevention of dental caries may briefly be summed up as follows:—

Gottlieb has pointed out that dental caries is essentially a process of dentine necrosis, performed by bacteria which have succeeded in invading the dentine through openings in the enamel—the lamellae. These, always filled with organic matter, serve as roadways for the invasion. It is worth noting that sugar, sweetening these roadways, thus plays its part in the production of dental caries. Once the bacteria reach the dentine they are able to proliferate in such favourable surroundings, and spread the process of decay rapidly.

All enamel has lamellae; they are found more frequently at the bottom of developmental grooves and, more important, at the contact points. "Immune" teeth are found in mouths in which the favourable salivary composition produces deposition in the lamellae, of blockades against the bacterial invasion. This led to the thought that it might be possible to block the invasion paths by chemical means. This could be done by applying a solution of Zinc Chloride (40%) which would coagulate the albuminous material, and then applying a solution of potassium ferrocyanide (20%) which would precipitate the coagulum to form a bulky mass of white, insoluble zinc ferrocyanide. This would effectively block the tiny openings to prevent bacteria from coming in. Benzine would be applied first, to remove any fat deposits, then nacconol, a wetting agent, (1%) to reduce surface tension and permit penetration of the chemicals. This treatment is applied

3 or 4 times per year between the ages of 6 and 12, once a year thereafter.

I have found it desirable to modify the procedure in several respects, in order to make it more effective and more easily practised in the dental office or clinic. In order to clarify this method, I detail the following steps:—

1. Prophylaxis
2. Isolate the area, groups of 3 or 4 teeth at a time.
3. Dry the teeth.
4. Go through the developmental grooves with a scaler point.
5. On a pellet of cotton, well soaked, apply benzene (note—this is the fat solvent)
6. Go through the contact points with dental floss.
7. Evaporate the benzene with a blast of air.
8. On a pellet of cotton, apply a 40% solution of zinc chloride, in which is incorporated a 1% solution of Tween 20. This latter is a wetting agent used in industry, which is far more effective in reducing surface tension than is nacconol. (The chemical name of Tween 20 is Polyoxyalkylene sorbitan mono-laurate).
9. Dental floss is forced through the contact points.
10. Wait one minute.
11. On a pellet of cotton, well soaked, apply a 20% solution of potassium ferrocyanide in which is incorporated a 1% solution of Tween 20.
12. Force dental floss through the contact points.
13. Allow patient to rinse the mouth.
14. Repeat steps 8 to 12, several times if desired.

Several comments at this point may

be of help. Zinc chloride is a powerful caustic and should be used with care. I have used both 40% and 50% solutions with no ill effects. The chemical equation: $2\text{ZnCl}_2 + \text{K}_4(\text{Fe}[\text{CN}]_6) = \text{Zn}_2(\text{Fe}[\text{CN}]_6) + 4\text{KCl}$, when comparative amounts of materials are worked out, shows that about three times as much of the potassium ferrocyanide solution is needed to satisfy (neutralize) the zinc chloride. The method is useful for treating a prepared cavity prior to insertion of a filling, in which use it is desirable to merely wet the dentine with the first solution, and flood it with the second. It is to be noted that zinc chloride when coagulating albumin produces free hydrochloric acid. Thus, in ordinary cavities, apply the second solution almost immediately; in deep cavities, have a pellet of cotton, well soaked in the second solution, ready on the bracket before applying the first solution. In this way any pain produced by application of the zinc chloride will be avoided or eliminated. A slight cloudiness or "settling out" of the zinc chloride solution in the bottle does not spoil its effectiveness.

Since the contact points are so vulnerable to dental caries, it is essential to ensure the solution gaining access, by using dental floss. I have found it convenient to use an instru-

ment which enables the floss to be handled more easily. A draftsman's compass, with the point and lead removed, has a set screw and a groove across each end, so that the floss may be quickly and easily stretched across, tightened, then removed after use.

Since it is organic material in the dentinal tubules carrying sensation to the pulp, that causes sensitive areas in teeth, the treatment becomes obvious—

Isolate and dry the tooth being treated.

Wash with benzene, then dry.

Apply zinc chloride solution.

Follow with the application of the potassium ferrocyanide solution.

Repeat the last two steps as deemed necessary. The test for the success of the treatment is the application of cold water to check sensitivity to thermal shock.

I wish to pay tribute to Mr. L. Craig, B. S. (Chem.) for invaluable assistance in arriving at the proper formulae for the solution used in this method of treatment.

REFERENCE:

Dental Caries, by B. Gottlieb, M.D., D.M.D., pp. 231 et seq.

773 BATHURST STREET.

To paraphrase Dr. Basil Bibby's message to the Massachusetts Dental Hygienists' Association on its 25th anniversary, the dental hygienist was never conceived for the broad field into which she is rapidly progressing. She was brought into being for the purpose of cleaning teeth, to relieve the dentist of a tedious but necessary minor operation, in the days when dentistry was convinced that cleaner teeth would mean fewer carious teeth. With the changing concepts of modern research the dental hygienist has become primarily an educator, an extra right hand of the dental profession, a proficient operator in preventive dentistry, and a necessary adjunct in public health programs all over the United States.—From Editorial in Jour. of Am. D. Hygienists' Assoc.

"The right angle from which to approach any problem is the try angle."

"Some books are to be tasted, others to be swallowed, and some few to be chewed and digested."—Bacon.

ANNOUNCEMENTS

Canadian Dental Association Convention, June 20-24

at the

MANOIR RICHELIEU, MURRAY BAY, QUEBEC

All Canadian dentists will rally at this beautiful resort hotel in June for study, fellowship and a good time.

Make your reservations now by applying to Dr. Gustave Ratté, 140 St. John St., Quebec City.

Attention Class of '28

Mark off your appointment book and plan to be with us at YOUR class reunion at the O.D.A. convention.

THE PLACE: Royal York Hotel. THE DATE: May 17th, 1948.

MURRAY ROBB—pres.

Northwest Conference in Dental Medicine

The Northwest Conference in Dental Medicine will hold its fifth annual meeting at Sun Valley, Idaho, April 25-30, 1948.

George J. Anday, M.D., instructor in Clinical Laboratory Diagnosis at Loyola University Medical School, Chicago, will give a series of lectures on Haematology: The normal blood picture, diseases of the blood, and the oral manifestations of blood disturbances.

Balint Orban, M.D., D.D.S., Research Fellow of the University of Illinois Dental School to investigate Periodontal Diseases, will present the following phases of periodontal diseases: Haematology, Histopathology, Systemic Aspects, Classification and Diagnosis.

Leonard S. Fosdick, Ph.D., Professor of Chemistry at Northwestern University, Chicago, will discuss "Mouth Chemistry in Caries Control".

The officers of the Conference are: Dr. W. A. Moline, Spokane, President; Dr. Uel Cobb, Spokane, First Vice-President; Dr. T. T. Rider, Missoula, Montana, Second Vice-President; Dr. A. A. Litscher, Spokane, Secretary-Treasurer; Executive Committeemen, Dr. R. O. Barton, Spokane, Dr. Theodore Houk, Seattle, and Dr. Henry Stoffel, Portland, Oregon.

For further information about this meeting contact Dr. Litscher, 1064 Paulsen Medical Dental Building.

The vitamins which so far have been shown to be needed by man, or to be of undoubted clinical significance, are the following: vitamin A, vitamin B₁, three components of the vitamin B₂ complex—namely, nicotinic acid, riboflavin, and folic acid—vitamins C, D, and K, together with several different forms and modifications of most of them.

The significance of some other vitamins for human nutrition is still somewhat uncertain: these include two additional "B₂ vitamins" (biotin—vitamin H—and choline), and also vitamins E, F, and P.

A third group of vitamins comprises those which have so far been demonstrated only by means of animal experiments. These consist of four vitamins of the B₂ group (vitamin B₆—pyridoxin—pantothenic acid, inositol, p-amino-benzoic acid.)—LESLIE J. HARRIS, Sc.D., D.Sc., F.R.I.C., Dunn Nutritional Laboratory, University of Cambridge, and Medical Research Council.—Br. Med. Jour.

The Forum

CHEMOTHERAPY AND THE ANTIBIOTICS

by EDWARD C. DOBBS, D.D.S., Baltimore, Md.

Condensed from N. Y. Jour. of Dentistry, Dec., 1947.

Chemotherapy had its inception in 1909 when Ehrlich and Bertheim synthesized arsphenamine.

Toxic symptoms are not uncommon with arsenic therapy, due to the toxic metal and to the dangerous intravenous route of administration.

The arsenicals may be applied topically in a 2 to 3 per cent solution in water, saline (0.9%), glucose (5%), or glycerine and water, equal parts. These solutions may be applied to ulcerated areas or periclasia pockets and held in place for 5 or more minutes. The literature reports as many failures as successes with this form of treatment. For best results, only freshly prepared solutions should be used.

SULPHONAMIDES

Sulphadiazine has earned the reputation of being the "king of the sulphonamides." In dentistry it may be useful in the treatment of stomatitis, osteomyelitis, cellulitis, septicaemias, subacute bacterial endocarditis, lateral sinus thrombosis, compound fractures, gas gangrene, sinus infections, etc. due to gonococci, hemolytic streptococci (Launcefield type A) streptococcus viridans, staphylococci, gas bacilli, etc.

The toxic reactions to the sulphonamides in general must be continuously watched for. Serious symptoms indicate immediate stoppage of the drug.

Drug fever, which is often difficult to diagnose and often complicates the prognosis, is now considered to be a

warning for discontinuance of administration. Drug rash on the skin and mucous membranes demonstrates a sensitization of the patient, and necessitates a careful study and watchfulness that more serious conditions are not developing. Patients receiving regular doses of the drug should not be permitted to operate vehicles, work about dangerous machinery or engage in activities requiring accurate neuromuscular coordination.

All in all there are hundreds of these sulpha compounds many of which have not been tested pharmacologically or therapeutically.

Warning against the injudicious use of the sulphonamides, as ointments, powders, sprays, medicated bandages, tablets, etc., was sounded by Dr. David Bloom of New York. He found that these drugs may sensitize as many as one-third of the patients who use them. He continues by saying—that only when a sulpha-drug is clearly indicated should it be prescribed, as a sensitization may contraindicate its use at a later time when the patient's life may be at stake.

The effectiveness of these drugs in dental practice is judged on their prophylactic, ameliorative, and/or curative results. As a prophylactic they are used locally following tooth extraction as a powder suspension, paste or tablet. The sterile powder may be applied by insufflation and the area isolated by a piece of gauze soaked in tincture of benzoin which is allowed

to dry in place. The treatment may be repeated every 24 to 48 hours. Whenever possible the drug should be incorporated in the blood clot. The routine use of large quantities of the sulphonamides following tooth extractions is not good therapeutics, while a "frosting" of the area by insufflation may be an acceptable procedure.

In acute osteomyelitis of dental origin, sulphadiazine medication is begun at once.

The local use of the sulphonamides in chronic osteomyelitis in which supuration, necrosis, and sequestration has occurred, has not met with gratifying results as the presence of tissue fluids, decomposition products, pus, para-aminobenzoic acid, etc. retards or destroys their bacteriostatic action. This may also explain their unsatisfactory results in alveolalgia (dry socket).

In infected root canals, the presence of pus and decomposed tissue proteins inhibits the action of the sulpha-drugs.

There is little indication in the literature to justify the use of the sulphonamides in necrotic gingivitis or stomatitis of the Vincent type.

The aetiology and treatment of aphthous stomatitis is not clear at this time. Sutton advocates the use of sulphathiazole for this condition.

In the treatment of cellulitis of dental origin the medication should be started at once.

Kelson, in a study of 500 case records of subacute bacterial endocarditis at the Massachusetts General Hospital, found an incidence of recent dental operations in 25 per cent of the cases. This evidence points to a definite aetiological role of dental surgery to this highly fatal disease. In cases where the physician is aware of cardiac disease which may predispose to this condition, the patient should be forewarned.

Dentists should question all patients requiring extractions as to the condition of their heart, and refer all

doubtful cases to a physician for consultation.

The current literature now reports better results with penicillin for treatment of "dry socket" than with the sulphonamides, and there is less danger of toxicity.

PENICILLIN

The varying responses seen in penicillin therapy and the continual increase in the dosage requirements suggest that a variety of compounds are being marketed under a single name. At present, four fractions are isolated and identified; F, G, K and X. Physical (crystallographic) and possibly chemical tests are available for the qualitative and quantitative determination of these compounds.

The maximal efficacy occurs sometime between four and six hours after contact with the bacteria. This is an important clinical finding showing the need for prolonged exposure of the pathogens to the drug.

Unlike the sulphonamides, the action of penicillin is not inhibited by pus, tissue decomposition products, blood serum, or para-aminobenzoic acid.

For the best therapeutic results, the concentration of penicillin in the blood and fixed tissues must be maintained at an adequate level until the symptoms of infection disappear.

Now that penicillin is more plentiful and the cost greatly reduced, the oral route for systemic effect is more popular. While these (oral) preparations are expensive, they generally give gratifying results, do not require hospitalization or the services of a nurse, and are more convenient for the patient. The dose is three to five times the intramuscular dose. The oral preparations are particularly desirable for the specialties, as dentistry, eye, nose and throat, genito-urinary, etc.

The excretion of penicillin is chiefly through the kidneys.

The blood and tissue concentration of penicillin following a single injection

tion is maintained at a therapeutic level for about three hours. Therefore for best results the administration should be repeated every two to four hours day and night.

Allergic reactions to penicillin therapy are becoming more prevalent as time goes on. It is too early to say the percentage of patients who will be sensitized to this drug, but it may be as high as 18 per cent (Hanzlic). It is important that the use of penicillin for minor infections does not sensitize the patient against subsequent use, when the patient is seriously ill. Fortunately, the reactions which we have observed have not been serious. We must conclude that penicillin is not a harmless drug, and perhaps, in time, more serious symptoms may be recognized in susceptible patients.

The use of penicillin in the treatment of so-called "Vincent's infection" has been favourably reported in the literature. The drug apparently reduces the number of micro-organisms on and in the tissues and produces a temporary remission of symptoms.

Actinomycosis is a chronic disease of cattle and is sometimes transmitted to man. In beginning infections penicillin is effective against the causative organisms. When the infection has been of long duration, the organisms are walled off in the tissues, and it is impossible for the penicillin to destroy them.

For acute osteomyelitis of dental origin of the mandible, maxilla, and contiguous facial bones, penicillin therapy is often satisfactory in aborting the acute phase. When the infection has been brought under control, conservative surgical treatment, as the removal of diseased teeth, may be attempted. The drug treatment should be started as soon as possible and continued for two or more days after the surgery. The penicillin should be administered intramuscularly day and night. If extensive suppuration with sequestration develops, the case must be treated as chronic.

In chronic osteomyelitis of dental origin where suppuration, necrosis, sequestration, and fistulae have developed, the prognosis with penicillin treatment is not as favourable. In these cases surgical treatment plus the medication is necessary. Penicillin should be used locally and systemically. The infected area may be irrigated three or more times per day through a drainage tube. Intramuscular injections may be given every four hours, except at night when the patient is sleeping. The oral systemic preparations may be used for ambulatory office patients and those confined to the home without a nurse in attendance.

The use of penicillin for the treatment of the so-called "dry socket" has met with varying results. As the condition is a localized osteitis, or, less frequently, an osteomyelitis, penicillin may have some value in aborting the infection. As the predisposing factors may be of a local circulatory nature, with necrosis of the bone, the results may not be spectacular.

The use of penicillin in the treatment of cellulitis of dental origin has been very gratifying. The medication should be started at once and the patient confined to the home, or, in severe cases, hospitalized.

There is always a danger of an osteomyelitis or a cellulitis in the dental field spreading by continuity to the brain or through the circulation to the cavernous sinuses. When such a development is suspected, the patient should be hospitalized immediately and a continuous intravenous injection maintained at 200,000 to 300,000 units per day, until the dangerous symptoms disappear.

Penicillin is now being advocated in preventing bacterial endocarditis following tooth extraction. In susceptible cases with a history of rheumatic fever, or debilitated patients with badly diseased teeth or periodontium, the administering of 100,000 to 200,000 units following the extraction may

give protection from this highly fatal infection. If an infection has already occurred, rest, good diet, and penicillin injections every three hours day and night until the blood is bacteria free is the best form of treatment.

The use of penicillin in endodontics (root canal therapy) has not been favourably reported in the literature. There are evident reasons for these failures, as anomalies of structure and form of the teeth, extent of the infection, and non-susceptibility of the pathogenic organisms to the drug. We can, therefore, conclude that penicillin is not a drug of first choice in endodontics.

The latest use of penicillin is in the prevention and control of dental caries. While the aetiologic organisms of this disease have not been determined, the early work of Hill suggests that penicillin may be indicated. The drug is combined in a powder dentifrice and used on a brush with water immediately following meals. Time will tell the value of this treatment in the control of that universal scourge—tooth decay.

OTHER ANTIBIOTIC AGENTS

Besides penicillin, there are other antibiotic agents which are useful in therapeutics. Tyrothricin is one of

the older members and is perhaps the best known.

Our work at the University of Maryland has shown tyrothricin to be less efficient than penicillin for the treatment of oral diseases. Tyrothricin is hemotoxic and must not be injected into the tissues.

Streptomycin is a new antibiotic. Earlier this year the total streptomycin production in the United States was only 14 ounces per month. For that reason our knowledge is not very complete.

Streptomycin resembles penicillin as to toxicity and absorption. It is generally administered intramuscularly every 4 to 5 hours. Oral administration is poorly absorbed, only about 10 per cent being recoverable in the urine. The reactions which follow intravenous administration or large frequent intramuscular injections are probably due to impurities. These reactions resemble histamine intoxication and should be treated as such. The dosage for streptomycin has not been worked out but is probably similar to penicillin.

Streptomycin therapy is still in the experimental stage. Its use in dentistry must wait for a greater abundance of the drug and time for careful scientific investigations.

Two glamour girls boarded a crowded streetcar, and one of them whispered to the other, "Watch me embarrass a seat from a male passenger."

Pushing her way through the straphangers she turned all of her charms upon a gentleman who looked substantial and embarrassable. "My dear Mr. Brown," she gushed loudly, "fancy meeting you on the streetcar. Am I glad to see you. Why you're almost a stranger. My but I'm tired."

The sedate gentleman looked up at the girl, whom he had never before seen, and as he rose, said pleasantly, "Sit down, Bertha, my girl. It isn't often that I see you out on washday. No wonder you're tired. By the way, don't deliver the washing until Wednesday. My wife is going to the district attorney's office to see whether she can get your husband out of jail!"

Depend on a rabbit's foot if you want to, but remember—it didn't work for the rabbit!

THE EARLY DIAGNOSIS OF CANCER

by Sir Heneage Ogilvie, K.B.E., M.Ch., F.R.C.S.,
Surgeon to Guy's Hospital

Condensed from British Med. Jour., Sept. 13, 1947.

Early diagnosis of cancer is the reward of a suspicious mind. Does a man who has eaten like a horse till the age of 40 suddenly get indigestion, though his job, his habits and his wife remain the same? No! Does gastric ulcer start after 40? Never—well, hardly ever! Does the tired business man come back tired after a week at Westward Ho? Not if his tiredness is no more than business worry. These people want investigation before, not after, they start a course of diet and medication on the advice of the chemist, the man in the train, or the writer of the health column in the evening paper. The seller of alkalis is the undertaker's best friend.

Authorities vary greatly in their estimate of the number of stomach ulcers that become malignant. I, personally, believe that the number is

very low, indeed. I must place on record that in twenty years of gastric surgery I have never seen a gastric ulcer become malignant.

Cancer mimicking ulcer, on the other hand, is seen by every surgeon several times a year. Cancer of the stomach, while it is usually a very rapid disease, may be very slow, going on for ten years with little change. The true ulcer usually starts in the twenties, and, in its long history before its final cure by medicine or surgery, has many remissions of months' or years' duration.

If our suspicions continue, if the weight continues to fall, we must insist on an exploration. There is more rejoicing in heaven over the one laparotomy that fails to find cancer than over the ninety-and-nine (positive ones) that find it too late.

THE TREATMENT OF SUBACUTE BACTERIAL ENDOCARDITIS

by CHARLES H. SCHEIFLEY, M.D., M.S. in Medicine and
ALBERT B. HAGEDORN, M.D., M.S. in Medicine, Division of Medicine.

Condensed from Proceedings of the Staff Meetings of the Mayo Clinic

Patients having this once fatal disease can now be saved in the great majority of instances.

Because of this radical change in the therapeutic outlook, the early recognition of the disease becomes increasingly important. Its presence should be suspected in any patient with valvular heart disease who has unexplained fever of more than a week's duration. The usual history is that the patient had had a "cold" a few weeks previously which he had been unable to overcome. Not infrequently, the infection is initiated by some type of minor surgical operation, notably dental or nose and throat procedures. The diagnosis is made easier by the presence of typi-

cal signs such as heart murmur, embolic phenomena, fever, splenomegaly and anaemia but any of these signs may be absent in a given case, especially early in the course of the disease. In the final analysis, the diagnosis is established by culturing the causative organism from the blood.

In an effort to add to the total accumulated experience in order that a final evaluation of the treatment of subacute bacterial endocarditis may one day be possible, the records of the penicillin-treated patients which had been seen at the Clinic were reviewed.

There were forty patients for whom adequate follow-up data were obtained. Thirty-one of these patients were alive and symptom-free at an in-

terval which averaged sixteen months from the time treatment was stopped. This represents a survival rate of 77.5 per cent.

It seems apparent that a high percentage of cures will be possible regardless of the plan of treatment employed if certain minimal requirements are met. The element of duration of treatment is important. A minimum of three to four weeks of continuous therapy appears necessary. The daily dose of penicillin must be adequate. A minimal daily dose of penicillin, usually 500,000 to 1,000,000 units per day, is sufficient in the ordinary case. For the usual patient, the route of administration, either intramuscular or intravenous, does not seem to be important. In infections due to highly resistant organisms, the intravenous method is best

since frequent large painful injections can be avoided and because a high blood level of penicillin is much more easily maintained. However, it is all-important to regulate the treatment according to the requirements of the individual patients. Such factors as the in vitro sensitivity of the organism to penicillin (which is only a rough guide), a knowledge of the dosage and response to previous treatment, the duration of the disease and the general condition of the patient, all must be considered in outlining a course of therapy.

In conclusion, we believe it is safe to predict that, if therapy is started early and if it is sufficiently intensive, as dictated by the requirements in the individual case, a remarkably high percentage of recoveries will be obtained in this once fatal disease.

The reason a lot of people do not recognize an opportunity when they meet it is that it usually goes around wearing overalls and looking like hard work.—Monitor.





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Editorial

HOLD OUR GROUND

For a number of years a great many dentists of Canada have enjoyed a fantastic practice in that no effort has been necessary to promote it; little attention has been called for with regard to details which in ordinary times would wreck a practice unless due consideration was given to the same. Some seem to think this condition is going to prevail forever, but certainly not for those who fail to see the hand-writing on the wall.

The "Buyers' Market" is here in many lines. Stiffer competition is appearing once again. Eventually these conditions will be reflected in the practice of dentistry and so it behoves us to plan for the future now by educating our many patients in such a way that, come what may, dental health will remain an outstanding "must" in their minds. To the man who adopts such a policy now, a great practice will continue to be his in the days to come.

If we have been careless in the past, let us resolve to be careless no longer and take to heart the following Salesman's Prayer: "Oh, Lord, in these days when anybody can sell anything, help me to remember that it will not always be thus; that humility is still the hall-mark of the successful salesman, that the seller is always the servant of the buyer; that arrogance costs as many orders as ignorance of the line; that I have too short a memory ever to tell a lie, and that buyers have too long a memory ever to forget a wrong. Above all, help me to remember that no one ever lost an order because quality was too high, or service too good. Amen."

Few of us under the strain of the past few years have not been guilty of some lack of consideration for our patients but in this connection let us remember the design for living of the late Dr. O. W. Caldwell, General Secretary of the American Association for the Advancement of Science, expressed in these words: "Our lives are for what we may do, not for what we have done." So let us look to the future and let us be persuaded to give some of our precious time to the education of our patients, for these patients must be made aware of the great importance of a healthy mouth. Perhaps what dentists can do for man should be made subordinate to what lack of dentistry may produce in a man in the way of inadequate mastication, poor appearance, lack of comfort and serious infection, leading up to those dramatic diseases that man desperately fears.

Furthermore, dental health rests not in man's knowledge about the value of dentistry but in his desire for dental health as one of the finer things of life. He must desire a healthy mouth for his family and himself more than many of the extensively advertised luxury products, else the family will suffer and the dentist also. We must have co-operation if our ideals are to be reached.

Edward Samson aptly states the problem when he says, "It is criminal folly to induce a man to want what he does not need; that is unscrupulous advertising. But it is criminal negligence not to make man want what he does need."

In addition to better patient education, now is the time to check up on equipment, on furnishings, on decoration; the time to commence making more complete records; the building up once more of that important recall list; and the arranging for a proper credit set-up which should include the budget plan for those patients who need this type of credit accommodation. Could we not hear more about the solution of these problems at our local society meetings, and at our provincial and national conventions?

Our future success will depend upon the energy which we put into these neglected sides of our practice, upon our attitude towards our patients. So let us educate our patients while they are with us in large numbers, remembering that people often shy away from what is good for them. Need must be changed to desire. We must Hold our Ground.

M. H. G.

DON'TS

Don't have your secretary answer incoming calls with "Who is speaking?" The reason must be obvious. The party calling may be a very desirable patient but at the moment, it may be impossible for the doctor to take the call, in which case, the patient may feel that, had it been someone else, he would have answered and resentment is engendered. The secretary should put the call straight through to the doctor. If the doctor is unable to answer, the patient can be so advised. If able to answer, the contact is made and can be cut short, if necessary or desirable.

CANADIAN DENTAL ASSOCIATION NEWS

FROM THE OFFICE OF THE SECRETARY

Dental Students Register, 1947-48

The following tables give statistical data relating to the student body attending Canadian Dental Schools, for the current academic session. It will be noted that the number of students have reached the highest point (922) of any year of which we possess record. In view of the fact that one school (Toronto) has no regular senior year it may be predicated that the number will be higher in the 1948-49 session. The present senior year at Toronto is made up of graduates of other universities in the undergraduate course. The accelerated plan instituted during the war accounts for the non-existence of undergraduates in the senior year at Toronto. All schools will be back to a normal basis next session as the effects of the accelerated plan will have terminated.

The accommodation for freshmen next fall will be 167 with some elasticity in two schools, particularly in respect to veteran applicants. (Table 2)

The number of graduates during the year 1947 was 149, of which 5 were female. Except for the year 1943, in which year due to acceleration two classes graduated in some schools, this number is the highest since the graduating classes following the first great war. As can easily be determined by the figures given for the other years now in the schools, this number will be greatly enhanced for the immediately future years following 1948. In 1948 there will be fewer graduates

than normal owing to the situation at Toronto, as described above.

The number of female graduates on this continent has always been exceedingly low, when compared to male graduates. In 1947 there were 5 female graduates or 3.5% which is a higher percentage than average. In many European countries the number of female graduates is equal or higher than that of male.

Table 5 gives the distribution of students by provinces. The ratio of the number of students from each province to the population is as follows:

Prince Edward Island	1 to 10,000
Nova Scotia	1 to 19,000
New Brunswick	1 to 21,000
Quebec	1 to 16,000
Ontario	1 to 13,000
Manitoba	1 to 22,000
Saskatchewan	1 to 10,800
Alberta	1 to 11,700
British Columbia	1 to 20,000

The number of dental students attending schools outside of Canada can be ignored in all provinces, being exceedingly few, except British Columbia. The above ratio does not properly represent British Columbia as a sizable number (unavailable at present) are in attendance at American schools.

Interesting comparison may be made of the ratio of students to population in a province with the ratio of practitioners to population in that province. For example, Saskatchewan as shown above has a high ratio of students in the schools, but on the other hand has the lowest rate of dentists to population of any province.

TABLE 1

Total Enrolment of Undergraduate Students in the Dental Schools of Canada as of January 2nd, 1948

University	Freshman	Sophomores	Juniors	Seniors	Men	Women	Total
Dalhousie University	12	10	6	9	36	1	37
McGill University	41	36	35	15	125	2	127
Montreal University	60	64	43	41	205	3	208
Toronto University	159	*177	75	24	491	4	435
Alberta University	25	51	22	17	113	2	115
Totals	297	338	181	106	910	12	922

*Including 16 Combined First-Second Dental Year

TABLE 2

Maximum Number of Undergraduate Students that can be Accommodated in a Class for Next Session

Dalhousie University	12
McGill University	20 (to 40—Veterans)
University of Montreal	50
University of Toronto	60
University of Alberta	25 (to 30)
Total	167 (to 192)

TABLE 3

Recapitulation of Undergraduate Enrolment in the Dental Schools of Canada 1939-1947 Inclusive

School	1939-1940	1940-1941	1941-1942	1942-1943	1943-1944	1944-1945	1945-1946	1946-1947	1947-1948
Dalhousie University.....	36	31	25	25	22	28	27	38	37
McGill University.....	60	58	61	67	67	51	73	111	127
University of Montreal.....	90	104	118	139	154	162	184	188	208
University of Toronto.....	222	210	232	270	255	264	180	340	435
University of Alberta.....	56	51	49	53	24	34	54	108	115
Totals.....	464	454	485	554	522	539	518	785	922

TABLE 4

Total Number of Graduates During the Years 1939-1947 Inclusive

School	1939	1940	1941	1942	1943	1944	1945	1946	1947
Dalhousie University.....	15	12	7	8	11	6	8	0	10
McGill University.....	17	13	18	9	26	12	13	5	18
University of Montreal.....	16	23	14	31	18	37	30	41	36
University of Toronto.....	49	56	45	40	103	61	58	56	75
University of Alberta.....	18	13	13	32	8	24	7	0	10
Totals.....	115	117	97	120	166	140	116	102	149

For Year 1947

	Males	Female
Dalhousie University.....	10	0
McGill University.....	17	1
University of Montreal.....	36	0
University of Toronto.....	71	4
University of Alberta.....	10	0
	144	5

TABLE 5

Distribution of Undergraduate Students by Provinces and Foreign Countries in the Dental Schools of Canada as of January 2nd, 1948

School	Pr. Ed. Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Br. Columbia	United States	Br. West Indies	Newfoundland	Denmark	Haiti	France	Poland	Australia	Great Britain	South Africa	China	New Zealand	Totals
Dalhousie University.....	5	19	9	0	0	0	0	1	0	0	0	3	1	0	0	0	0	0	0	0	0	37
McGill University.....	3	7	7	54	11	6	9	3	12	5	3	1	1	0	0	0	0	0	0	0	0	127
Montreal University.....	1	4	6	177	4	2	3	0	0	7	0	0	0	1	1	2	0	0	0	0	0	208
Toronto University.....	0	2	1	1	317	19	31	9	25	2	0	0	0	0	0	0	19	4	2	2	1	435
Alberta University.....	0	0	0	0	1	7	35	57	15	0	0	0	0	0	0	0	0	0	0	0	9	115
Totals.....	9	32	23	232	333	34	78	70	52	14	8	4	1	1	1	2	19	4	2	2	1	922

TABLE 6

Additional Students

	Dalhousie University	McGill University	University of Montreal	University of Toronto	University of Alberta	Totals
Graduate during 1947.....	0	0	5	12	2	19
Post-graduate during 1947.....	0	0	50	95	0	153
Dental Nurses 1947-48....	0	0	0	*8 occasional 25	0	25

The term "Graduate" means proceeding to a degree.

The term "Post-Graduate" means taking a course other than proceeding to a degree.

NEWS FROM THE PROVINCES

QUEBEC

Montreal Dental Club

The 50th annual meeting of this club was held on December 15, 1947, at the R.C.A.M.C.-R.C.D.C. Barracks. The meeting was preceded by a dinner which was largely attended. The club was privileged in having as guests at the dinner, members of the Council on Dental Education of the Canadian Dental Association which was holding sessions in Montreal at that time.

Dr. R. B. Bell, retiring president, reported on the year's activities. The secretary's report was given by Dr. T. Ross Murray, and the treasurer's report by Dr. C. R. Seller. Dr. M. L. Donigan, chairman of the Fall Clinic Committee, reported on the 23rd Annual Clinic held last October. All reports noted steady progress in the life of the club.

Officers for 1948 were elected as follows:

<i>Honorary President</i>	Dr. R. B. Bell
<i>President</i>	Dr. J. W. Abraham
<i>President-elect</i>	Dr. A. D. Richardson
<i>Secretary</i>	Dr. R. F. Harvey
<i>Treasurer</i>	Dr. W. H. Boyles
<i>Historian & Archivist</i>	Dr. C. C. Bourne
<i>Executive Committee</i>	Drs. W. G. Leahy; E. S. Dorion; M. A. Rogers; F. A. Ed- ward; T. Ivan Guilboard; D. C. Gordon

Montreal Endodontia Society

At the November meeting of the Society the guest speaker was Dr. H. H. Lubinski, Bacteriologist and Serologist of the Jewish General Hospital and a past associate professor of the University of Breslau. Dr. Lubinski's paper on "Bacteriology in Endodontia" was a most interesting one reviewing much of the work that has been done relative to the different types of organisms found in root canals of teeth. Dr. Lubinski was of the opinion that it was impossible for these organisms to enter the tooth by way of the blood stream but that their entrance was from the mouth. This theory provided some lively discussion for the members.

At the December meeting two members presented papers, namely Dr. N. P. Solomon on "Restorations for Fractured Anterior Teeth" and Dr. M. B. Archambault on "Electro-medication in Endodontia." With the aid of models Dr. Solomon illustrated various types

of restorations that could be used for different classes of fractured anterior teeth. Dr. Archambault outlined his technique for electro-medication of root canals. Both papers were most ably presented and merited the enthusiastic appreciation of the members of the Society.

F.I.C.D. Conferred Upon Dr. M. L. Donigan

The International College of Dentists has recently elected Dr. M. L. Donigan of Montreal a Fellow of the College. This award was made "in recognition of conspicuous services rendered to Dentistry."

Montreal Dental Nurses' and Assistants' Association

The annual convention of this Association was held at the Mount Royal Hotel October 24-27. Speakers who generously provided both interesting and educational lectures included Rt. Reverend Dr. T. W. Jones, Dean R. G. Ellis, Dr. Roger McMahon, Dr. John Earle, Dr. W. J. Johnston, Dr. D. H. Miller and Mr. R. Copeman.

Out of town guests included Miss M. Edwards, Toronto, President of the Canadian Dental Nurses' Association; Miss L. McCaughey, London, Ont., representing the Ontario Dental Nurses' Association; Mrs. E. Proulx, President of the Quebec Dental Nurses' Association; Miss C. Abel, Quebec; Miss Rita Larocque, Miss H. Manville, Ottawa, and Mrs. Ritcey, Halifax.

Election of officers for the current year took place with the following results:

<i>President</i>	Miss J. Green
<i>1st Vice-President</i>	Miss M. Good
<i>2nd Vice-President</i>	Miss Pat. Doyle
<i>Recording Secretary</i>	Miss D. McRae
<i>Cor. Secretary</i>	Miss O. Goodenough
<i>Treasurer</i>	Miss M. Starr
<i>Archivist</i>	Miss A. Ratner
<i>Registrar</i>	Miss F. Wiseman
<i>Editor</i>	Miss M. Rosenberg
<i>Program Convener</i>	Miss D. Good
<i>Publicity Convener</i>	Miss B. Coté
<i>Membership Convener</i> —	

Miss P. Aird, Miss Desjardins

Convention Convener—

Miss E. Derick, Miss F. Limoges

BARBARA COTE

BRITISH COLUMBIA**Victoria and District Dental Society**

Under the excellent leadership of President Dr. J. Demery Johnson, this Society has been enjoying fine monthly meetings this season.

In September the members were honoured by having as guest speaker Dr. Agnew, Professor of Pathology at the Union University of West China. He gave first an illustrated talk on "Amelogenesis" after which he spoke on "Impregnation Techniques." At the close of the meeting, Dr. Agnew showed some very interesting slides on Tibet.

Also in September there was a business meeting held, at which Mr. M. L. King of Victoria spoke on the proposed Medical-Dental Building in Victoria.

The visit of Dr. Ken Carver and Dr. Don Gullett to the Society in October was greatly enjoyed and appreciated. Although, of necessity, the meeting was held on Thanksgiving night, a goodly number of members turned out to hear these two men speak on phases of the work of the Canadian Dental Association.

In November the Society was especially honoured in having as guest clinician Dr. Maury Massler, B.S., D.D.S., M.S., of the University of Illinois. His topic was "Infections of the Mouth-Differential Diagnosis, and New Methods of Treatments."

In his afternoon lecture Dr. Massler dealt with the Streptococcal, Staphylococcal and Vincent infections.

In the evening he continued with the Virus and Fungi infections.

We are looking forward, particularly, to the B.C. Convention at Victoria in April.

ALBERTA**Edmonton Dental Society**

Fifty members attended the December meeting of this Society when Dr. C. B. Rich, F.R.C.P. spoke on "Types of Rheumatism", Dr. P. J. Kendal presiding.

Dr. W. G. Hall was introduced as a new member of the Society by Dr. G. H. Brown.

Dr. W. Orobko was the guest speaker at the January 6 meeting of this Society, the subject being "Dentistry for Children".

Dr. M. A. McIntyre expressed the thanks of the Society to Dr. Orobko for his splendid address.

Dr. C. Lipsey proposed the following men

for membership in the Society: Dr. W. R. Auger of Stettler; Dr. A. Harder of Barrhead; Dr. W. H. Scott of the Oliver Institute.

Dr. P. J. Kendal presided.

G. Y. BARNETT.

Calgary Dental Society

The regular meeting of this Society was held on January 12.

The guest speaker was Dr. Geo. Brass of Edmonton, who gave a very interesting talk on "The Present Day Approach To The Root Canal Problem".

After having covered the pathology of the root canal, he divided the treatment into seven steps, which he covered thoroughly, namely:

1. Asepsis
2. Control of pain
3. Access
4. Removal of Pulpal Tissue
5. Sterility
6. Filling
7. Healthy periodontal membrane.

Dr. Brass's talk was thoroughly enjoyed by all.

J. G. WALKER.

Voluntary Health Insurance

Alberta doctors have decided to engage in voluntary health insurance. At a meeting of the College of Physicians and Surgeons of Alberta held in conjunction with the Alberta division of the Canadian Medical Association it was decided to apply by private bill for the incorporation of a society among whose objects would be to provide facilities whereby individuals, heads of families, health groups, associations, employers and/or employees of corporations, municipal bodies or any responsible authority may attain for themselves adequate medical care and treatment on a prepayment basis; and to enter into agreement with, and, if possible and desirable, amalgamate and unify all existing medical and prepayment plans for which legally qualified medical practitioners of Alberta are now rendering service.—*Canadian Doctor*.

SASKATCHEWAN**Saskatoon Dental Society**

The guest for the December meeting of this Society was Dean Scott Hamilton of the Dental College, University of Alberta. Dr. Hamilton presented a practical clinic morning and

afternoon in exodontia (impactions). After the evening dinner he presented an illustrated clinic on various fracture cases and types of fixation. He also referred to prognathism and treatment for same. Dr. Wilf Cotter moved the vote of thanks on behalf of the Society to Dr. Hamilton for his most enjoyable and inspiring visit.

The January meeting had two guests, Dr. J. Schachter of Saskatoon and Dr. Lorne Connell of Prince Albert.

Dr. Schachter, an orthodontist of the city presented a very interesting orthodontic clinic on Malocclusion. He discussed at length Space Maintainers and Habit Breakers. He displayed the various types by using models.

Dr. Lorne Connell, the last President of the Saskatchewan Dental Association, gave an interesting report of the situation in this province of the voluntary body during the past twenty years; he outlined the organizations in the other Western provinces, and the need for re-organizing so that the members in our province could meet in convention.

Originally the Saskatoon Dental Association held conventions every two years, then dispensed with conventions but imported clinicians to visit the cities. Then conventions were held in Moose Jaw in 1936 and Regina in 1938. Saskatoon was to be host for the next convention but with the war on it was dispensed with. There have been no conventions nor clinics since and the money of the late Association is held in trust by the Provincial Dental Council which is something over \$400.00.

His investigations showed that in Manitoba there is one body, namely the Manitoba Dental Association. It is the Association of our profession, corresponding to our College of Dental Surgeons, and the governing body is the Board of the Association. There is a provision in their Act for election by districts, but it is not mandatory. An annual meeting is held usually in Winnipeg, at which outstanding clinicians attend.

Alberta is somewhat similar to Manitoba with the Association being the legal body, governed by the board. Their board is elected by districts. Clinicians have been arranged from time to time.

The Saskatoon Society was unanimous in that some provision should be provided for the members of the profession to meet in convention, to hear clinicians and to have an oppor-

tunity to discuss the affairs pertinent to our profession. It was decided to ask Regina and Moose Jaw for their viewpoints.

The meeting adjourned after extending appreciation to Dr. Schachter and Dr. Connell.

L.D.H.

MANITOBA

Manitoba Dental Association

The regular January election of three members of the Manitoba Dental Association to its Board of Directors for a term of two years resulted as follows: Dr. A. R. Hurst of Brandon, Dr. J. G. Elsey and Dr. Kenneth M. Johnson, both of Winnipeg. In addition to those just mentioned the other three members are Dr. N. C. Carmichael, President; Dr. Paul Cleave, Vice-President and Dr. J. F. Morrison, Secretary-Treasurer and Registrar. Dr. Cleave is also Mayor of Neepawa. Dr. E. H. Clark of Minnedosa, a former member of the Board of Directors, is now Mayor of his city.

Winnipeg Dental Nurses' and Assistants' Association

The regular dinner meeting of this Association was held on January 12 with a goodly number of members present.

After the business meeting, Miss Jane McClure, Program Convener, led the group in a lively round table discussion covering many helpful hints for a dental assistant.

DOROTHY MCCULLOCH.

Winnipeg Dental Society

The Winnipeg Dental Society, with President Dr. Charles S. McLeod in the Chair, held a well attended and extremely interesting afternoon and evening meeting on January 12.

Can an abnormal mandibular-maxillary relationship of edentulous persons as determined by dentures constructed by dentists who fail to establish the correct vertical dimension be the basic cause of psychological disturbances of such magnitude as to baffle the psychiatrist's attempts to discover the origin of the symptoms? Dr. Carl Storberg of Duluth, Minnesota, says "Definitely, yes." Dr. Storberg is a prominent dentist of many years' experience who has much success as a prosthodontist. He says he has been consulted by medical specialists including internal medicine, psychiatry and

neurology after they have failed to determine the cause of the systemic symptoms of certain edentulous patients. Upon investigation Dr. Storberg has found that the patients have what he calls incorrect physiological-psychological relationship of the jaws as caused by improper vertical relationship of dentures.

After correcting this abnormal relationship with new dentures the patients have gradually returned to normal health. If this is as true as it sounded coming from Dr. Storberg, what a keg of nails it opens up! — J.F.M.

ONTARIO

It's a Date — March 12 University of Toronto Alumni Night

The Annual Alumni party will be held again in Hart House, Friday evening March 12. There will be dancing with two good orchestras, sports events including exhibition of swimming, boxing, wrestling, etc., marionette show, some fortune telling and for those who want a quiet evening of bridge.

Our own Dr. John Bothwell is the President. Last year 2,000 people attended this function so get your tickets now at \$1.50 each. Dress is optional. — ROY KERR.

Niagara Peninsula Dental Association

The Niagara Peninsula Dental Association is enjoying a very fine Program for the 1947-48 season, with two Dinner Meetings and a Ladies' Night having been held so far.

The first Dinner Meeting was held on October 10, 1947, at the Hotel General Brock in Niagara Falls, with the President, Dr. Don Johnstone of Niagara Falls in the chair. At this Meeting Dr. C. H. M. Williams of Toronto gave an excellent address on "Gum Recession — Its Causes and Treatment" well illustrated with lantern slides. There were forty-five regular members present and many guests, including several from Hamilton, Ontario, Niagara Falls and Buffalo, New York.

On December 6, 1947, an informal Ladies' Night was held in conjunction with the Supper Dance at the General Brock Hotel in Niagara Falls. This was the first attempt at anything of its kind in the history of the Association and though the attendance could have been better, it was sufficient to warrant a repeat performance for next year and certainly those attending did have a good time.

The second regular Dinner Meeting was held on Friday evening, January 16, at the Welland House in St. Catharines. We had as our Clinician at this Meeting Dr. Ralph Peterson of Minneapolis, Minnesota, whose subject — "Acute Infections of the Face and Jaws" was excellently presented and very clearly illustrated with first-rate slides. Fifty members were present from all parts of the Peninsula and their efforts were well repaid by an extremely fine Clinic.

Also at this Meeting tribute was paid to Dr. William Alexander MacLean of St. Catharines, who has completed over fifty years in the practice of Dentistry. Dr. MacLean graduated in 1897, practised for several years in Hamilton, then moved to St. Catharines in 1902 where he has resided and practised ever since. He was presented with a Leather Card Case containing a Silver Plaque inscribed with an Honorary Life Membership in the Association.

With the season so far such a decided success we have every reason to believe that our next three Meetings will prove to be just as instructive and enjoyable.

Officers of the Society are:

President—Dr. D. G. Johnstone, Niagara Falls
Vice-President—Dr. F. E. Dawe, St. Catharines

Treasurer—Dr. G. K. Chapman, Fort Erie.

Secretary—Dr. W. B. Smeaton, Niagara Falls.

Directors—Dr. K. M. Phillips, Welland; Dr. M. C. Parks, St. Catharines.

Alpha Omega Meeting

The guest speaker of this Society for its January meeting was Dr. Gaylord James of Cleveland, Ohio. Dr. James is Assistant Professor of Practice Management at Western Reserve Dental School and has occupied the chair of the Economics Committee of the American Dental Association for the past three years.

The essayist presented an afternoon and evening session of great interest. Dr. R. P. Lowery, President of the Ontario Dental Association, Dr. Harold Shepherd, President of the Toronto Academy of Dentistry, together with other guests, were invited to enjoy Dr. James' discourse.

Dr. H. M. Jolley president of Alpha Omega presided at the meeting. The speaker was presented by Dr. G. R. Sidenberg and a motion of appreciation of the speaker's address was sponsored by Dr. John Sherman.

"2T3"

History records that in 1805 Nelson said, "England expects every man to do his duty." In 1948 a certain committee chairman says he expects every member of class 2T3 dentistry to do his duty, which is to mark off on his appointment book the dates of the Ontario Dental Association Convention, May 17, 18, 19. This is not for the purpose of going fishing but for the purpose of attending the 25th anniversary of our class graduation to be held at the Royal York Hotel in Toronto. Your committee are spending considerable time and effort to make this meeting one that is worth while. To make it a real success plan to be there.

JESSE FULLERTON.

London Dental Society

All sessions of this Society are dinner meetings and the subjects presented seem to have such general appeal that each meeting attracts practically a full attendance of members. The Society enjoyed a record membership in 1946-47. It is expected that this record will be equalled or bettered in 1947-48 in spite of an increase in fees which now stands at fifteen dollars per year.

On November 5, Dr. Victor Stiffel of Columbus, Ohio, was guest speaker. He presented a discussion on the subject "Removable Partial Dentures and Related Factors", in which fundamental essentials were emphasized and explained in great detail.

On January 13, Dr. Ralph G. Peterson of Minneapolis, presented his essay with slides on "Acute Infections of the Face and Jaw".

This proved to be an excellent refresher and reminder of what may be encountered by the general practitioner in dentistry.

Further meetings of the year are planned at which it is hoped to have lectures on Complete Denture Prosthesis and Periodontia. For the final meeting of the year, it is anticipated that members of the Society will journey to Chatham where two or three will present short papers before Kent County Dental Associations.

A feature of this Society is a regular luncheon meeting every two weeks at which the essays which have been presented are discussed or short papers presented by members. These meetings have a regular attendance of over half the number of dentists practising in London, all of which signifies in no slight degree the spirit which prevails within our group.

Dr. A. G. Davdson is President of the Society and has proved an able leader. He is supported by the following executive: Dr. S. R. Moore, Past President; Dr. C. L. Strachan, Secretary-Treasurer and Drs. C. M. Snelgrove and T. D. McCall.

Dr. Ralph G. Peterson Visits Toronto, Hamilton and London

In January Dr. Peterson presented a splendid address to the above associations using as his subject, "Acute Infections of the Face and Jaws". The speaker read a paper then proceeded to present a lecture using slides to illustrate from many practical cases of his own.

The plan of treatments suggested throughout was conservative yet every advantage was taken of the newer drugs, applying them as a supplement to good surgical practice.

GENERAL NEWS

Bachelor of Science in Dental Hygiene

At a meeting of the Board of Regents held November 22, the School of Dentistry at the University of Michigan was authorized to offer a four year curriculum in Dental Hygiene leading to the degree of Bachelor of Science in Dental Hygiene.

The Curriculum will consist of two years of 60 hours of credit in the College of Literature, Science, and the Arts or in another college of equivalent standing, provided that the curriculum of study and the grades earned have

been such that they would admit the candidate to a field of concentration leading to a degree in the College of Literature, Science, and the Arts, and a two year Curriculum in Dental Hygiene which will be the same as that now offered with the addition of 9 hours to be specified.

The four year curriculum will not supersede or in any way alter the present two year program of training for which a Certificate in Dental Hygiene is awarded.

Genetic Effects of the Atomic Bombs in Hiroshima and Nagasaki

The Atomic Energy Commission recently formally signified its intention of supporting long-range medical studies of the survivors of the atomic bombings in Japan, to be conducted by the Committee on Atomic Casualties of the National Research Council.

Whether the atomic bombs dropped on Hiroshima and Nagasaki will have detectable genetic effects on the Japanese is a question of widespread interest.

It must first be recognized that, inasmuch as the majority of mutations occurring in animals are recessive, only the relatively small proportion of mutations which are dominants may be expected to show effects in the first postbomb generation. The potential range in their effects is very wide. Dominant mutations with large, clear-cut manifestations can be expected to be much rarer than those with smaller, but possibly quite significant, effects on bodily dimensions, life span, etc. But the detection of these latter is a matter of great difficulty with present techniques. For practical considerations investigation will have to be concentrated chiefly on the class with such large effects as may lead to stillbirths, to live births with gross external abnormality, or to internal defects causing death or serious illness in infancy.

The survivors of the bombing received amounts of irradiation ranging from negligible to just short of lethal. It is impossible to say on a priori grounds whether an adequate number of people absorbed sufficient radiation to produce enough dominant mutations to result in detectable effects. However, comparison of this situation with the experimental data on infrahuman material suggests that these effects, if detectable, will be small.

It cannot be too strongly emphasized that there is at present absolutely no reliable evidence on which to base any opinion concerning the absolute or relative frequency of congenital abnormalities among children being born in Hiroshima and Nagasaki. Unfortunately, a good deal of mis-information is currently in circulation.—From Science.

Lectures by Phone

The University of Illinois, College of Dentistry, sponsored a series of lectures that were transmitted by telephone to dentists in different parts of the country. Beginning November 5, the series continued for six weeks. The lecturer spoke from one of the college lecture rooms and his voice was amplified over a public address system in the designated city.

Council on Dental Education Announces New Brochure

The Council on Dental Education announces the publication of a new brochure which contains the papers and discussions presented at the Third Congress on Dental Education and Licensure in February. Some of the topics discussed are: re-evaluation of the dental curriculum, national qualifying examinations in the professions, aptitude testing program, future of specialties in dentistry, and auxiliary branches of dental practice represented by dental technicians, dental laboratories, dental hygienists and dental assistants.

Cost of Medical Care in U.S.A.

"John Q. Public will pay out \$38.74 this year for his personal medical expenses. The health bill for each member of his family will set him back a similar amount. That's the estimate of the American Pharmaceutical Manufacturers' Association, which notes that medical costs have jumped 83 per cent since 1940.

"The total bill for health in this country, the APMA estimates, will reach \$5.5 billion in 1947. Included in this amount, it figures, will be \$1.5 billion for drugs and sundries and \$1.43 billion for physicians' fees."—Medical Economics per Public Health Economics.

Unemployment Insurance

"Social workers all over the nation now tend to condemn any system of public or private relief that calls for prying into the private affairs of an individual and the sacrifice of most of his rights as a person," Joseph P. Anderson, executive secretary of the American Association of Social Workers, reported

October 2 for the 11,000 members of his organization.

"Any assistance program, no matter how well administered, has a demoralizing effect on every person subject to a means test—a system that means that his relatives, savings, property and insurance are opened for inspection," Mr. Anderson said.

"Social workers now support instead a comprehensive form of social insurance that would make unnecessary present-day methods of old-age assistance, aid to dependents, to children and unemployment relief," he declared.—*New York Times*.

Dental Caries to be Studied at University of Kansas City

A grant of approximately \$6,000 has been awarded by the U.S. Public Health Service to the School of Dentistry, University of Kansas City, for further research in the prevention of tooth decay.

Bernard Baruch Advocates Compulsory Insurance

Compulsory health insurance for low-income groups, financed through payroll deductions and some Government aid, was advocated November 19 by Bernard M. Baruch as vital to the attainment of adequate medical care for all people of the United States. Mr. Baruch, whose audience consisted of 600 leading New York physicians and hospital administrators, also warned many members of the medical profession that they had "been fighting a rear-guard action for too long" against this type of social insurance.

Since the number of doctors, nurses and technicians is limited and hospitals are already strained, he said any program started would have to move in stages, on the local level. He expressed his own preference for Government meeting only a part of the cost of such a program, with part coming in payroll deductions from employers and workers.

He noted that in 1939 the Bureau of Medical Economics of the American Medical Association had estimated that families with an income of \$3,000 or less, two-thirds of the population, could not "afford the cost of serious illness".

"Some of these", he said, "can afford voluntary insurance, although inflation has reduced

their number. But what of the little fellows who cannot? I have asked that of nearly everyone with whom I have discussed medical care. Nothing has been suggested so far which promises success, other than some form of insurance covering these people by law and financed by the government, at least in part—what some would call 'compulsory health insurance'."

Among Mr. Baruch's recommendations were the following: More and better doctors—in more places; a prompt survey to modernize medical education, with emphasis on chronic and degenerative diseases, mental hygiene and preventive medicine; more hospitals more evenly spread through the country. Fewer specialists, more general practitioners; reorganized medical practice with emphasis on group medicine where needed and voluntary health insurance; increased medical research; expanded physical and mental rehabilitation; health education; a preventive medical program designed primarily for children. Greater number of well-trained nurses and technicians; adequate dental care, and a stabilizing economy . . .

Mr. Baruch commented that inflation would make valueless any health program or anything else, and said: "Should health schemes fail, be sure to ask—were they killed by the plan itself—by incompetent administration, or by an inflation which ruined the plan's financing?" As a non-professional, Mr. Baruch said he would dislike to see any medical care program under the guidance of others than those who have the highest professional skill.

"That is why," he said, "I urge the doctors to get in and pitch—not stand by the sidelines. You need fear politicians or bureaucrats only to the degree you fail yourselves . . ."—*New York Times*, 97:31 November 20, 1947 per Public H. Economics.

Cold Vaccines

Investigation by HEALTH NEWS in the realm of cold vaccines obtained the opinions expressed below—

An official of the United States Public Health Service wrote that "in spite of the numerous publications on this subject there are no reported studies which prove convincingly the merit of such preparations. In the field of immunology it is a well understood fact that the immunity can only be developed

by the use of specific antigens and not through the use of antigens prepared from organisms entirely unrelated to the aetiology of the disease."

A Canadian medical man prominent in the public health field said: "As the causative agent has not been discovered, specific vaccines are not available. Vaccines that have been used in the past have not proven of any value in controlling the common cold. This has been proven in carefully controlled experiments."

A prominent Canadian industrial physician, while stating that present-day cold vaccines have no clinical value, added that their "favourable psychological reaction is enormous."
—*Health News*.

Dental Caries

Reduction in the consumption of sugar and the application of a solution of sodium fluoride to the teeth of children are among the most effective known means of reducing dental decay which afflicts nine out of each ten persons, a group of scientists reported in *The JOURNAL* of the American Dental Association.

A total of 114 dentists, physicians, biochemists and nutritionists joined in a review of existing scientific knowledge regarding dental decay at a conference sponsored jointly by the University of Michigan and the Kellogg Foundation.

In their report, they said that it is now definitely known that dental caries (decay) is caused by acid resulting from the action of micro-organisms on carbohydrates, principally sugar, in the mouth.

The scientists challenged a number of popular misconceptions regarding the cause of dental decay, pointing out that sickness, general health or nutritional status has no significant bearing on the process of dental decay.

"In fact," they wrote, "several scientific reports reveal that malnourished persons have a decreased incidence of dental caries."

They attacked the ancient belief that pregnancy and lactation is a cause of dental decay, and questioned the theory that emotional upsets may influence decay of the teeth.

The scientists also swept aside the theory that brushing the teeth alone will prevent dental decay. They said that brushing the teeth must be done immediately after eating to have any effect in inhibiting decay.

Also, they refuted the theory that increased consumption of vitamins and minerals would ensure healthy teeth, declaring:

"The ingestion of vitamins and minerals, in amounts in excess of those required for a normal diet, has not been demonstrated to have any relation to dental caries."

They also said that they were unable to find any substantial evidence that uncooked fruits or vegetables and other so-called detergent (cleansing) foods reduced the caries attack rate.

The group reported that topical (local) application of a solution of sodium fluoride to the teeth of child patients had reduced dental decay by an average of 40 per cent. However, they described the use of foods and other preparations for home use containing fluoride salts as inadvisable and pointed out that evidence is still incomplete on the fluorination of domestic water supplies as a means of reducing dental decay.

In regard to sugar, the scientists reported: "Studies by a number of investigators indicate that the restriction of sugar, either refined or natural, is effective in the control of dental caries. Moreover, the restriction of sugar, either refined or natural, will improve the dietary, provided the caloric intake remains adequate. The harmful effects of sugar, refined or natural, are not reduced by the addition of either vitamins or minerals."

"Women's Home Companion" Article on 'Bootleg Dentistry' Not Endorsed by the A.D.A.

In the January issue of "Women's Home Companion," which went on sale Dec. 19, there is an article entitled 'Bootleg Dentistry.' This article was prepared in New York without consultation with the American Dental Association.

In view of the widespread prominence given this article, Dr. Harvey B. Washburn, President of the American Dental Association, has issued the following statement:

"The problem of 'Bootleg Dentistry' is not one which involves any more than the usual fringes of a profession and its auxiliary trades. The great body of dentists in this country are vigorously opposed to 'Bootleg Dentistry'. Dentists are competent to perform needed laboratory services for themselves. They are competent to judge the quality of dental ap-

pliances which are processed for them by the laboratory in order that dentists can devote a greater portion of their time in direct service to the public.

"Only dentists are qualified by law, experience and training to perform dental operations. The dental profession is opposed to any plan of any dental technician or laboratory to serve the public directly.

"The dentists of the country, through the American Dental Association and its affiliated societies, have long devoted considerable time and attention to this problem. In every state, laws which have been secured through the efforts of the dental profession protect the public from exploitation by illegal dental laboratories. Dental societies cannot enforce laws and the present problem of 'Bootleg Dentistry' must be traced directly to that fact. The enforcement of dental practice laws by state agencies, is perhaps, one of the most neglected areas of law enforcement in the important field of public health. The American Dental Association has engaged in an intensive study of this problem for several years. It has reached the conclusion that further legislation is not desirable until existing laws have had the benefit of full enforcement."

Vitamin C

Because of the fact that a source of vitamin C is readily available in citrus fruits, the Canadian public perhaps has generally failed to realize that there are other sources of this vitamin which is necessary in any diet, it is stated in HEALTH NEWS, member publication of the Health League of Canada.

For instance, there are three domestic vegetables which are relatively cheap and available throughout most of the year—potatoes, turnips and cabbage—which contain vitamin C. These three, if properly prepared and properly cooked, can be used to supplement any other vitamin C source.

It is estimated that 3½ ounces of raw cabbage, or properly cooked turnips, or properly cooked potatoes, each contain more than one-

half the estimated daily vitamin C requirement of an adult. It would be well to remember, however, that there is loss in vitamin content in these vegetables during winter-long storage.

Other foods, in quantities of 3½ ounces, which contain enough or more than enough vitamin C to take care of a person's estimated daily requirement, include cooked black currants, red and green peppers and raw parsley. Others which contain at least half the required vitamin C include liver and canned strawberries. Tomato juice and canned raspberries also are fairly good vitamin C sources.

It should be remembered, however, that overcooking and mashing largely destroys the vitamin C content of foods. This particular vitamin is soluble in water and oxidizes when it comes in contact with air. For instance; potatoes should be cooked with their skins on—cabbage should be eaten raw or cooked with a minimum of water for a minimum length of time—and turnips should be cooked for only 20 to 30 minutes if a reasonable portion of the vitamin C is to be retained. All vegetables should be placed in boiling water—not in cold water and then brought to the boil.

Much more of the vitamin C content will be retained if cooking is done with a pressure cooker.—*Health League of Canada.*

Oral Cancer

Greater development of teaching in the field of oral cancer at Ohio State University's College of Dentistry has been made possible through a grant of \$4,990 from the U.S. Public Health Service.

The grant, recommended by the National advisory Cancer Council, will facilitate the teaching of pathology, diagnosis and therapy of oral cancer by making possible the expanded activity of present personnel and employment of new personnel.

"Clinics, microscopic conferences, seminars and lectures will be used", Dean Postle said, "these will emphasize the importance of cancer, in general, and oral cancer, in particular."

A father was buying a fountain pen for his son's graduation gift. "It's to be a surprise, I suppose?" asked the clerk.

"I'll say it is," said the father. "He's expecting a convertible coupe."

IN MEMORIAM

George F. Bush, of Winnipeg, Manitoba, aged 84, died January 15. He had practised dentistry in Winnipeg for sixty years previous to his retirement two years ago.

He held many high positions in the dental profession and served as President of the Manitoba Dental Association for ten years, having been elected a member of the Board in 1897. He had served as Secretary for nine years and represented Manitoba on the Dominion Dental Council for twenty years. He also served as President and Secretary of the Canadian Dental Association, as well as Vice-President.

He was judge of the Fine Arts and Handicraft Section of the Provincial Exhibition for twenty years and held a medal for original water colours. For over thirty years he was organist and choir master of St. Michael's and All Angels Church and was organist at Holy Trinity Church for many years before that.

Born in Yorkshire, Dr. Bush became a friend of a band leader in his English village and learned to play practically all the instruments of the band when a youth. In the early eighties he organized a band in Winnipeg.

He enjoyed many hobbies. In the early days he ran in the snow-shoe races from Winnipeg to Headingly. He also built a pipe organ in the basement of his home.

Dr. Bush's wife died two years ago. His only close survivor is a sister. Several nephews and nieces also survive.

Joseph Morrison Mitchell, of Collingwood, Ontario died on January 5.

He was graduated from the College of Dentistry of the Royal College of Dental Surgeons in 1900. After graduation he studied in New York for a year then began to practise in Collingwood where he continued until his death.

He was a member of the Municipal Council

for the past 13 years and prior to that was a member of the Board of Education for 21 years. At the time of his death he was Deputy Reeve of Council and also of Simcoe County Council. For many years he has been a member of the Board of Trade and was serving on the executive.

He was a member of Manitou Lodge A.F. & A.M., Manitou chapter and the Shriners. He was a life member of the I.O.O.F., and a member 46 years and Chieftan for 3 years in the Stuart Camp, Sons of Scotland. He was a member of the First Presbyterian Church.

He is survived by his widow and one son Ivan.

John C. Bansley, of Toronto, Ontario, aged 83, died January 2. He was graduated from the Royal College of Dental Surgeons of Ontario in 1895 and later took post-graduate work in Philadelphia.

He was in active practice in Toronto until six weeks previous to his death.

He was a past master of King Solomon's Lodge, AF & AM, and was a former warden of Holy Trinity Anglican Church.

Dr. Bansley was a widower and is survived by several nieces and nephews.

Edwin Rodd Pearce, of Amherstburg, died on December 3, 1947 at the age of fifty years.

He was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1923. He immediately began to practise in Amherstburg and continued there until his death.

During the years of 1935-40 he was a member of the High School Board. He was a member of the Rotary and was treasurer of his club in the term 1939-40. He was a member of the Masonic order and of the I.O.O.F.

He is survived by his widow.

Two things bad for the heart:

(1) *Running upstairs.* (2) *Running down people.*

The man who lives for himself will be the sole mourner at his own funeral.

—Billy Sunday

PRÉVENTION DES MALOCCLUSIONS*

par LOUIS LÉPINE, B.A. D.D.S., Orthodontiste, Montréal

La carie dentaire.

Les restaurations dentaires inadéquates sont aussi une cause fréquente de malocclusion. Lorsque, dans la restauration, les éléments de contour normal de la couronne et des cuspes et les points de contact sont absents, il s'ensuit une malocclusion. Une mauvaise restauration de la surface occlusale d'une molaire inférieure entraîne un déplacement antérieur de ce segment avec une arche dentaire déviée.

Une dent cariée cause une malocclusion si elle se maintient ainsi assez longtemps, en produisant l'élongation ou bien le déplacement labial ou lingual de la dent opposée. De même dans le cas d'une obturation, dont la morphologie est absente ou inadéquate, il y a déplacement. On dit que l'être humain ferme les dents environ deux mille fois par jour; imaginez le déplacement de la dent opposée lorsqu'elle n'a pas d'opposition, comme dans le cas d'une dent à carie profonde ou d'une restauration incorrecte. On a bien négligé, malheureusement, la dentisterie opératoire chez les enfants sous prétexte que leurs dents doivent tomber sous peu. Une cavité bien obturée, en temps et lieu, préviendra des malocclusions futures et facilitera le processus de croissance en conservant la dent jusqu'à sa chute.

Donc, un autre moyen de prévention

des malocclusions dentaires, c'est l'obturation appropriée des caries sur les temporaires et les permanentes. Salzman nous dit que l'obturation des temporaires est par elle-même une des meilleures méthodes de prévention des malocclusions. Il va même jusqu'à préconiser le traitement de canal. Willett conseille d'obturer les dents à la même visite, autant que possible.

Dans un des derniers numéros du Journal de l'Association Dentaire Canadienne, on lit que la plus grande négligence de la profession a été de ne pas surveiller et diriger l'extraction ou la rétention de la première dentition. On ajoute que ce n'est pas tout de compter sur les recherches et les améliorations en orthodontie thérapeutique, qu'il faut d'abord savoir comment prévenir les malocclusions. Ceci nous amène à parler de la grande cause des malocclusions, l'extraction prématurée des temporaires, qui entre pour près de 60% dans les causes des irrégularités dentaires.

Extraction prémature des temporaires.

Durant la dentition mixte, de six à douze ans, période bien critique de la croissance, il faut retenir les temporaires jusqu'à l'époque de leur chute et les enlever dès qu'elles nuisent à l'éruption normale des permanentes. Les enlever trop vite, comme les conserver trop longtemps

*La première partie de cet article a été présentée dans la livraison de janvier 1948 du Journal.

c'est nuire aussi à l'éruption normale des permanentes. Les temporaires ne sont pas seulement des organes de mastication, mais elles sont des facteurs importants dans le maintien de l'intégrité des arcades durant le développement de la dentition permanente. McCoy nous dit: "Dans des conditions physiologiques normales, leur racine se résorbe à mesure que la couronne de la permanente progresse vers son éruption, leur présence jusqu'à l'éruption de la permanente est nécessaire à la conservation de l'espace pour cette permanente." Lorsque, pour une raison ou pour une autre, la temporaire est perdue prématurément, avant sa période de chute, l'espace dans l'arcade, réservé à la permanente remplaçante, est partiellement ou totalement perdu. Ce qui est dû au fait que la direction de la croissance et du développement de l'arcade est, entre autres directions, vers l'avant. La présence des temporaires est donc nécessaire pour maintenir la dent postérieure en place. Autrement, avec l'absence du contact proximal par suite de la perte d'une dent temporaire, la permanente postérieure à l'espace créé, avance et constitue une obstruction à la permanente, qui doit sortir dans cet espace. Le résultat, c'est que cette dent demeure incluse ou sort en dehors de l'arcade, et c'est une malocclusion.

La perte prématurée des temporaires n'a pas le même degré de résultat pour chaque dent. Lorsqu'une antérieure est enlevée, la latérale temporaire avance et prend la place réservée à la centrale permanente, qui devient irrégulière ou incluse. C'est malheureux de perdre une dent temporaire, mais perdre la molaire temporaire inférieure, surtout la deuxième, cause le plus de dommages. En effet, en plus d'entraîner l'elongation de la dent opposée, le côté de l'arc, où la perte a eu lieu, est retardé dans sa croissance. Il devient donc plus court que son opposé, et amène un déplacement qui se fait sentir jusqu'aux antérieures. De même, la perte de la canine temporaire est aussi très dommageable; il en résulte une canine permanente en position labiale ou incluse dans le palais. Remplacer cette canine par l'orthodontie exigera l'extrac-

tion de la prémolaire voisine dans la plupart des cas. Autrement, on risque de rendre la troisième molaire incluse en reculant tout le segment latéral, pour faire place à la canine en labio-version. De même, la perte d'autres temporaires entraîne des résultats plus ou moins grands de malocclusion suivant le cas.

Puisque l'être humain compte sur ses temporaires pour mastiquer durant environ le cinquième de sa vie, et puisque ces dents entrent en fonction à une époque de croissance d'une grande importance et d'une grande activité, cherchons alors à les conserver le plus longtemps possible. Il est bon de garder en mémoire que l'extraction prématurée d'une temporaire cause un ralentissement, même un arrêt dans la croissance du maxillaire. Il faut se souvenir aussi que les premières molaires permanentes ne prennent la position normale d'occlusion que lorsque les secondes molaires temporaires sont tombées. La radiographie, encore ici, nous aide à décider si une dent cariée peut être extraite sans nuire à la permanente, car on peut voir si cette permanente suit de près la temporaire. Dans ce cas, il n'y a pas de crainte à avoir, car la voisine ne pourra avancer dans l'espace. Autrement, il faut à tout prix conserver la temporaire jusqu'à sa chute, sinon, au moins, maintenir l'espace pour la permanente. L'obturation, répétons-le, est un des grands moyens préventifs de malocclusion.

Quant à l'extraction d'une temporaire pour permettre à une permanente de sortir normalement, il ne faut y procéder que très prudemment. On n'extrait pas à tort ou à travers, dès qu'on s'aperçoit qu'une permanente sort mal, dans le but de lui faire de la place. Les dents temporaires tombent généralement dans l'ordre de leur éruption, les antérieures inférieures d'abord, les supérieures ensuite. Viennent après les petites molaires, suivies des canines. Les temporaires tombent généralement aussi deux par deux, la droite et la gauche en même temps. Les inférieures précèdent généralement les supérieures de quelques mois. Le plus sûr moyen de savoir l'époque de chute des temporaires, c'est encore la radiographie. De plus, je le répète, n'extrayez

qu'une temporaire pour faire place à une permanente, jamais plus. On fait souvent l'erreur d'extraire une canine temporaire pour faire place à une latérale permanente, le dommage causé est considérable.

Souvent des parents inquiets amènent leur enfant chez le dentiste, parce que les centrales ou les latérales sont en rotation, ou bien en arrière, ou en avant de leur position normale, surtout les inférieures. Lorsque les inférieures permanentes sortent lingualement aux inférieures temporaires, c'est un signe qu'il est grandement temps d'extraire les temporaires correspondantes. Si les incisives permanentes sont en rotation, et elles le sont presque tout le temps, on ne s'en inquiète pas trop et, encore moins, doit-on décider de l'extraction des latérales temporaires. C'est une grave erreur qui est souvent commise. Les centrales, par suite de la pression de la langue contrebalancée par celle des lèvres, et cela dans une période importante de croissance latérale du maxillaire, se redresseront d'elles-mêmes la plupart du temps, justement grâce à la croissance du maxillaire. Enlever une latérale temporaire, dans ce cas, ce serait retarder cette croissance nécessaire et normale. On n'extraît jamais deux dents temporaires pour faire place à une seule permanente, répétons-le souvent. Ne commettez jamais l'erreur d'extraire les quatre incisives en même temps, que ce soit pour une raison ou pour une autre. C'est entendu que les incisives permanentes sortent un peu en rotation parce qu'elles sont plus larges que les temporaires. De même, ne faites jamais l'erreur d'extraire plusieurs ou même toutes les temporaires parce que vous êtes en train d'en extraire une.

Absence congénitale de dents.

On doit extraire les dents surnuméraires, sans aucun doute. Elles sont de trop, ce n'est pas naturel. Elles ne peuvent faire autrement que causer du trouble, surtout lorsqu'on est sûr que leur rétention peut nuire au bon fonctionnement de l'occlusion et à l'esthétique. Une autre cause de malocclusion qui entre dans le domaine de la prévention, c'est l'absence de dents, qui est généralement

congénitale et très souvent héréditaire, à moins qu'une extraction traumatique ou un traumatisme sur la temporaire ait fait mourir le bourgeon de la permanente. L'absence se rencontre peu chez les temporaires mais souvent chez les permanentes. C'est généralement la latérale supérieure qui est absente, assez souvent une seconde prémolaire inférieure et, aussi, mais rarement, la troisième molaire inférieure, rarement la canine. L'espace résultant de cette absence est autant une cause de malocclusion que l'espace laissé par une extraction. Il doit donc être maintenu. Si c'est la latérale qui manque, l'espace doit être maintenu. Autrement la canine sortira à la place de la latérale, réduisant ainsi le segment antérieur de la crête. Les antérieures inférieures se superposeront pour s'accommoder à l'occlusion dans la région antérieure. Lorsque les deux latérales sont absentes, il faut, à la sortie complète des centrales, insérer un partiel ordinaire avec deux latérales artificielles. Une fois les canines complètement sorties, on peut procéder à la restauration permanente.

Appareil de maintien.

Nous avons établi plus haut que la perte prématurée d'une temporaire laisse un espace qui se réduira, empêchant la permanente remplaçante de sortir normalement, et c'est un facteur étiologique de malocclusion. Comme moyen préventif, on peut employer l'appareil de maintien, appelé "space-maintainer", pour conserver l'espace jusqu'à la sortie de la permanente. Cet appareil de maintien consiste, en général, en une couronne sur la dent voisine de l'espace, à laquelle on soude une extension de jauge 18 qui ira toucher la dent de l'autre côté de l'espace. C'est l'appareil le plus employé et le plus facile de fabrication. Il y a aussi l'appareil de maintien dit "de Wesoke", employé aux Etats-Unis dans plusieurs cliniques de pédodontie. La méthode de Wesoke accepte comme fait établi que si une temporaire doit être extraite prématurément, c'est qu'elle est cariée à tel point qu'il est inutile d'essayer de la sauver. Alors, dans ces conditions, les voisines sont probablement cariées, elles aussi, au point de

contact. Donc, on fait sur les dents adjacentes une obturation mésio ou disto-occlusale suivant le cas, en amalgame. Dans les deux amalgames, on insère une tige de jauge 18, aux deux extrémités de laquelle on a mis une couche de "cavity lining". Le "cavity lining" disparaît avec le temps et la tige est libre dans les amalgames. De sorte que si une de ces temporaires adjacentes vient à tomber, la tige est facilement enlevée de l'autre amalgame et le trou laissé libre est ensuite rempli à son tour. Il faut que la tige soit basse, près de la gencive, que l'amalgame soit assez épais pour être résistant, afin que la tige ne puisse le briser. Cet appareil de maintien est effectif et facile à faire.

Spencer nous indique par ordre d'importance dans quels cas l'espace laissé par la perte prématurée d'une temporaire doit être conservé par un appareil de maintien. Après la perte: 1) d'une seconde molaire temporaire; 2) d'une première molaire inférieure; 3) d'une première molaire supérieure; 4) d'une canine supérieure ou inférieure; 5) enfin, d'une centrale supérieure ou inférieure. MacGregor énumère d'autres cas où l'espace doit être conservé.

Ce n'est pas tout de savoir qu'un espace, comme ceux mentionnés plus haut, doit être conservé; il faut savoir quand agir. Il est entendu que ce n'est pas nécessaire de la conserver dans tous les cas. Salzman nous donne un guide pour l'emploi d'un appareil de maintien:

- 1) Si l'espace montre des signes de réduction;
- 2) Si le maintien de l'espace doit aider ou rendre le traitement éventuel d'orthodontie moins prononcé;
- 3) Quand l'appareil ne nuit pas à la croissance normale;
- 4) Si la permanente remplaçante a encore une couche osseuse à traverser.

Il est préférable de prendre un modèle de la région dentaire intéressée et de le garder sous observation. Si le déplacement le fait juger nécessaire après étude de la radiographie, on peut et on doit insérer un appareil de maintien. Il vaut mieux, nous dit Salzman, errer en mettant inutilement un appareil, qu'en omettant,

par négligence, d'en mettre un. Il est assez rare qu'il soit nécessaire de conserver un espace laissé par une temporaire qui doit être remplacée dans quelques semaines. Le tableau chronologique d'éruption et de chute des dents peut être consulté pour plus de certitude, quand on n'a pas à sa disposition un appareil de radiographie. Il faut se souvenir qu'à l'époque des temporaires, il se produit une croissance active en largeur dans la région des antérieures, croissance qui permet la sortie des permanentes qui sont plus larges que les temporaires. L'inverse se produit si l'espace n'est pas maintenu; on assiste alors, par un processus non encore expliqué, à une réduction en largeur du segment antérieur contrairement à l'élongation normale. Dans ces cas, les permanentes manquent d'espace, deviennent irrégulières. Il faudra l'intervention de l'orthodontie pour redonner partiellement la grandeur nécessaire à ce segment antérieur afin de loger les permanentes. Ce qui sera long et coûteux. Il vaut donc mieux prévenir l'irrégularité par la conservation de l'espace antérieur.

C'est un devoir de veiller à ce que la fonction de mastication soit conservée dans son intégrité, que le développement normal ne soit pas entravé et que l'esthétique soit conservée. On nous dira que bien souvent une temporaire extraite est plus vite remplacée par la permanente. C'est assez fréquent, mais alors sa calcification ne sera pas complète et, de plus, elle offrira un support d'occlusion plutôt faible, justement parce que la formation de la racine n'est pas assez avancée pour le temps. La dent cèdera sous la pression de l'occlusion, qui deviendra une occlusion fermée.

Pratiquons la prévention en essayant de conserver les temporaires jusqu'à leur chute, sinon au moins conservons l'espace laissé par l'emploi d'un appareil de maintien. Cet appareil ne doit pas nuire à l'éruption normale des dents, ni à l'occlusion. Il ne doit pas non plus causer un déplacement des dents par suite d'une fabrication erronée et il ne doit pas enfin nuire à la croissance normale des maxillaires, cela va sans dire. (à suivre)



PAGES EDITORIALES

COMITE DE REDACTION

PAUL GEOFFRION, B.A., D.D.S., A.I.D.O., F.I.C.D., L.C.D. ARMAND FORTIER, D.D.S., L.C.D.

Rédacteur:

GERARD DE MONTIGNY, B.A., D.D.S., M.Sc.D., L.C.D.
397 est Boul. S.-Joseph, Montréal

"DURA LEX, SED LEX"

Dans la livraison d'octobre du Journal, paraissent des commentaires sur les nouveaux règlements du Collège des Chirurgiens-Dentistes de la Province de Québec, règlements votés par nos Gouverneurs depuis déjà plusieurs mois.

Ces nouvelles lois ont comme unique but de doter notre corporation d'un caractère plus professionnel, plus uniforme et moins commercial.

La majorité de nos membres a toujours tenté de donner à notre profession un cachet sobre, dénué de réclame tapageuse et de mauvais goût; d'autres dentistes, cependant—et c'est le petit nombre—ont toujours affiché une tendance malheureuse à commercialiser ou à industrialiser leur occupation, avec le danger pour le public à confondre le dentiste avec le marchand ou le regrattier.

Parmi ces articles de règlements, ceux qui regardent la réclame, ont une répercussion plus grande, parce qu'ils touchent plus intéressés.

En élaborant ces règlements, le Collège poursuit, avec une saine logique, un plan, qu'il réalise depuis plusieurs années; les restrictions s'avèrent de plus en plus rigides; les latitudes se rétrécissent; les limites se rapprochent; et ce—nous le croyons—pour notre plus grand bien.

Notre population n'encombrera plus les cabinets, où les enseignes ou les méthodes d'annonce étaient les plus apparentes ou les plus élaborées; notre public, désormais, se rendra chez les dentistes, qui lui donneront les meilleurs services.

Il est une constatation d'expérience, que tous les confrères, qui sont arrivés dans leur profession, confirment tous les jours. C'est que la clien-

tèle la plus stable, la plus reconnaissante et la plus rémunératrice est celle, qui est venue, attirée par la réputation et qui est repartie satisfaite des soins, qu'on lui a donnés. La clientèle passante, qui se laisse porter par les vagues de l'annonce tapageuse ou les ventes à rabais, n'a jamais satisfait personne, parce qu'instable et capricieuse. Avec ces règlements, qui uniformisent la réclame, la compétence réelle et le mérite de l'honnêteté auront droit de cité sur la camelote ou la façade étincelante. Quelques confrères, doués du vrai sens professionnel, auront l'impression de faire des sacrifices, en se soumettant à ces ordres de nos gouverneurs. Qu'ils se consolent en pensant que leur succès ne leur vient pas d'une grande enseignement, à la porte d'entrée de leur cabinet, mais bien, de leur travail consciencieux et effectif.

Le Collège a entrepris une campagne pour mettre en force ces nouveaux édits. Facilitons sa tâche, en se pliant de bonne grâce à ses demandes.

La profession, en général, s'en trouvera mieux et nous en tirerons tous du profit. Félicitons-nous d'avoir un Bureau de Gouverneurs assez éclairés et assez énergiques pour oser imposer à leurs gouvernés des règlements d'aspect draconiens, mais pleins de bon sens.

G. de M.

Les femmes dentistes, au Canada.

Jusqu'à maintenant, peu de femmes ont fait une carrière de la profession de dentiste, au Canada. Les Universités canadiennes acceptent sans discrimination les femmes, qui désirent étudier la Chirurgie Dentaire, mais ne voient pas la nécessité d'encourager les jeunes filles à s'inscrire comme étudiantes dans ce domaine.

Parmi les étudiants de 1946, 13 étaient des femmes, chiffre, qui représentait 1.7 pour cent du total. Au nombre des diplômés de 1946, il y avait une femme. Dans les provinces du pays, on note le nombre, suivant de femmes dentistes:

Ile du Prince-Edouard	0
Nouvelle-Ecosse	1
Nouveau-Brunswick	0
Québec	5
Ontario	22
Manitoba	1
Saskatchewan	1
Alberta	2
Colombie Britannique	3

Total 35

La majorité des femmes dentistes, au Canada, font de l'enseignement ou se spécialisent dans la dentisterie des enfants. L'élaboration de programmes de prévention dentaire, chez les enfants, élargirait le domaine favorable à la pratique dentaire féminine.

(Enquête sur la profession dentaire, au Canada, par le Ministère de la Santé et du Bien-Etre National, Ottawa.)



PHOTOS PRISES AU CHATEAU DE BLOIS, LORS DU BANQUET QUI MARQUA LE 25IEME AN-
NIVERSAIRE D'EXISTENCE DE LA SOCIETE DENTAIRE DES TROIS-RIVIERES.

Photo supérieure de gauche à droite: Mme J. K. Carver, de Montréal; le Dr Ernest Charron, de Montréal; Mme Conrad Godin, des Trois-Rivières, le Dr Ernest Rousseau, vice-président de la Société Médicale des Trois-Rivières, le Dr Conrad Godin, président de la Société dentaire des Trois-Rivières, Son Exc. Mgr Georges-Léon Pelletier, évêque des Trois-Rivières. *Photo du centre:* Le Dr Edmond Buisson, Mme Viger Plamondon, le Dr F. Houde, Mme Gabriel Lord, le Dr J.-W. Abraham, le Dr Eugène Lussier, de Montréal. *Photo inférieure:* Mme Ernest Rousseau, des Trois-Rivières, le Dr D. Forest, de Montréal, le Dr Paul Geoffrion, de Montréal, le Dr Gabriel Lord, de Montréal, le Dr Viger Plamondon, de Québec et Mme Fred Houde.

Dans le monde dentaire

Bottin de la Société Dentaire des Trois-Rivières

Un bottin, renfermant tous les renseignements possibles sur les dentistes pratiquant dans la ville même des Trois-Rivières et dans le district avoisinant vient d'être publié par le Comité Exécutif de cette Société.

Cette publication, qui, en outre, donne les noms des dirigeants de nos associations nationale et provinciales, représente un travail gigantesque de compilations et de recherches, susceptible de rendre énormément de services dans les relations confraternelles. Cette besogne est due en grande partie au docteur Conrad Godin, président de la Société Dentaire des Trois-Rivières et du District.

Activités de la Société Dentaire des Trois-Rivières pour l'année 1947-1948

Le programme d'activités de la Société Dentaire des Trois-Rivières pour l'année académique 1947-1948, élaboré au début de septembre, est en voie de se dérouler tel que projeté. Ce programme comprend les présentations suivantes:

Septembre 1947: "Impressions de guerre", conférence par le docteur Jossé de Wever, Anvers, Belgique et "Traitement d'un cas de fracture de maxillaire", projection d'un film du docteur A. Joachim, de Bruxelles, Belgique.

Octobre 1947: "Local Anesthesia", présentation d'un film par le docteur Hillard Nevin, Brooklyn, New York.

Novembre 1947: Célébration du vingt-cinquième anniversaire de la fondation de la Société et du Centenaire de la fondation du Collège des Médecins de la province de Québec—dîner de gala, à l'Hôtel De Blois des Trois-Rivières.

Décembre 1947: "Bread and Butter Surgery", conférence et projections de films scientifiques par le docteur George A. Morgan, Toronto.

Janvier 1948: "Empreintes complètes pour maxillaire inférieur à l'aide du MucoSeal", par le docteur Maurice Beaudry, Montréal.

Février 1948: "Inclusions." "Anatomie comparée," par le docteur Viger Plamondon, Québec.

"Nodules dentaires", par le docteur Jean Dallaire, Québec.

Mars 1948: "Considérations sur la carie dentaire", par le docteur Charles-A. Durand, Montréal.

Avril 1948: "Incrustations, dites de Willet, pour les dents temporaires", par le docteur Jean Brault, St-Lambert.

Mai 1948: "Expériences dentaires, au Pôle Nord", par le docteur Louis-B. Amyot, Schenectady, N.Y.

Juin 1948: Elections de la Société et grand souper de clôture, à Shawinigan.

Devise de la Société Dentaire des Trois-Rivières

Au cours de la célébration du vingt-cinquième anniversaire de la fondation de la Société Dentaire des Trois-Rivières, le président, le docteur Conrad Godin, a fait connaître à l'assistance le résultat d'un concours organisé pour doter la Société d'une devise. La devise choisie par l'Exécutif est: "Dentes sane in ore sano", soumise par le docteur Réal Lamothe.

Célébration du vingt-cinquième anniversaire de la fondation de la Société Dentaire des Trois-Rivières.

Le 29 novembre 1947, la Société Dentaire des Trois-Rivières a célébré le vingt-cinquième anniversaire de sa fondation. Cette fête prit la forme d'un dîner à l'Hôtel De Blois, des Trois-Rivières, présidé par le président de la Société, le docteur Conrad Godin, auquel assistaient les dirigeants de la profession dentaire de la province et qui avait comme hôte d'honneur, Monseigneur Georges Léon Pelletier, évêque des Trois-Rivières. Environ 200 personnes assistaient à cette réunion et à la table d'honneur, on remarquait:

Son Exc. Mgr Georges-Leon Pelletier, évêque des Trois-Rivières, le Dr Conrad Godin et Mme Godin, le Dr Ernest Rousseau, vice-président de la Société Médi-

cale des Trois-Rivières et Mme Rousseau, le Dr. J.-K. Carver, président de l'Association Dentaire Canadienne et Mme Carver, le Dr Denis Forest, registraire du Collège des Chirurgiens-Dentistes de la Province de Québec, le Dr Paul Geoffrion, vice-doyen de la faculté de Chirurgie Dentaire, le Dr Ernest Charron, Doyen de la faculté de Chirurgie Dentaire de l'Université de Montréal; le Dr Gabriel Lord, président de la Ligue d'Hygiène Dentaire de la Province de Québec et Mme Lord, le Dr J.-W. Abraham, président de Montréal Dental Club, le Dr Eugène Lussier, et Mme Lussier de Montréal, le Dr Viger Plamondon et Mme Plamondon, de Québec; le Dr Edmond Buisson, le Dr Fred Houde et Mme Houde, le Dr Rodrigue Dugré et Mme Dugré, le Dr Bélair et Mme Belair, le Dr Maurice Lafontaine, de Drummondville et Mme Lafontaine, etc.

Diplômé de l'Université de Montréal, à l'honneur.

Nous relevons dans le récit d'une cérémonie d'hommage aux dentistes belges, qui se sont distingués au service de la patrie au cours de la dernière guerre, la mention suivante au sujet du docteur Josse de Wever, qui reçut son D.D.S., à la faculté de Chirurgie Dentaire de l'Université de Montréal, en 1935. (*Le Journal Dentaire Belge, mai-juin 1947.*) "Notre Confrère et ami, Jos. De Wever, d'Anvers, D.D.S., Membre de notre Association, Commandant de Batterie en 1940. Milite dans la Résistance à la Légion Belge, dès octobre 1941. En 42, se voit attribué les dangereuses fonctions du courrier Belgique-Espagne pour le War Office.

Au cours d'une mission, le 28 janvier 43, est arrêté à Toulouse par la Gestapo. Transféré à la prison de Fresnes, mis au grand secret, portant menottes nuit et jour pendant quatre mois, maltraité aux interrogatoires et finalement déporté sans jugement au camp de concentration de Buchenwald en janvier 44. Est cité à l'ordre du jour des Forces Françaises Combattantes avec attribution de la Croix de guerre française avec étoile de bronze

et la citation suivante signée par le Général de Gaulle ainsi que par le Général Juin "Agent de courrier en territoire occupé, a rendu avec courage des services importants en assurant des liaisons dans des conditions particulièrement périlleuses. A été en service commandé, écroué pendant douze mois et déporté dans les camps de concentration nazis."

La Colombie Britannique augmente son octroi.

Le registraire du Collège des Chirurgiens-Dentistes de la Colombie Britannique annonce qu'à partir du 2 janvier 1948 la cotisation annuelle des membres à l'A.D.C. sera de huit dollars.

A date, toutes les provinces ont décidé d'augmenter leur octroi à l'Association Dentaire Canadienne. Sept provinces paient huit dollars par année, par membre, et deux provinces ont porté leur octroi à dix dollars.

Règlements fédéraux sur les voyages aux Etats-Unis.

Le Bureau du Contrôle des Echanges Etrangers autorise les banques canadiennes à procurer aux citoyens canadiens, qui désirent faire un voyage d'affaires de voyageurs pour un montant de \$150. par tête, par voyage, sans autre formalité.

Cette autorisation comprend les applications, qui arrivent des dentistes, qui désirent assister à un congrès ou suivre un cours dans l'intérêt de leur pratique.

Les demandes pour une somme dépassant ce montant doivent être faites directement au Bureau, avant d'être approuvées. Ces renseignements furent donnés, le 17 novembre 1947, aux représentants de compagnies de produits dentaires et les paragraphes suivants sont tirés d'une lettre circulaire émise par le gouvernement:

"Autorisation est donnée aux vendeurs de caractère officiel de remplir la formule H et de se procurer des fonds américains pour une valeur ne dépassant pas un montant de \$150.00, par tête, par voyage. Pour la définition d'un voyage

d'affaires, voir Paragraphe 6."

Le paragraphe 6, section 14, du Manuel d'Instructions pour les Vendeurs se lit comme suit: "Un vendeur de caractère officiel peut se procurer un permis, en utilisant la formule H, autorisant l'exportation de billets de banque canadiens ou étrangers, de monnaie ou de chèque de voyageurs pour un montant de \$150.-00 américains, par tête, par voyage, pour des fins de voyage d'affaires, sous les conditions suivantes:

a) Le voyage doit être nécessaire pour la poursuite des affaires d'une maison canadienne ou d'une pratique professionnelle, où l'applicant est engagé. Cela comprend:

1) Les cas, où une compagnie paie les dépenses d'un employé régulier pour assister à un congrès d'une spécialité, qui intéresse directement la compagnie;

2) L'assistance à une réunion scientifique ou professionnelle, où l'applicant doit retirer certains renseignements, qui l'aideront dans sa pratique.

3) L'assistance de délégués officiels à des congrès internationaux d'unions ouvrières ou autres; et

4) Des voyages commandés des membres des forces armées du pays; mais ne permet pas des voyages personnels ou privés ou l'assistance à une réunion de clubs sociaux ou autre du même genre.

b) En rapport avec une telle autorisation, le représentant d'une compagnie peut vendre des dollars américains pour une valeur n'excédant pas \$150.00, moins tout montant de billets canadiens, monnaie ou chèques de voyageur que l'applicant se propose d'apporter en dehors du Canada avec lui.

c) Quand l'application est faite par un particulier au nom de son employeur, la dite application doit être approuvée par l'employeur, au moyen d'une lettre officielle donnant la raison du voyage et le montant requis ou par la contre-signature de l'employeur sur la formule H, remise par l'applicant. Cette exigence peut être négligée dans le cas d'un applicant dont l'employeur ne demeure pas dans le centre, où la demande est faite,

ou s'il existe d'autres circonstances, qui dans l'opinion de l'applicant, rendre impraticable cette condition. Dans le cas d'un membre des forces armées en devoir, il doit joindre à sa formule de demande une lettre de son officier commandant.

d) Si plus d'un membre d'une même famille (v.g., un mari et sa femme) font application pour un voyage d'affaires en même temps, les applications doivent être soumises au Bureau. Les membres de l'Association ne devraient pas avoir de difficultés au sujet de leurs voyages d'affaires. Il est entendu que les dentistes peuvent se rendre aux États-Unis, aussi souvent qu'il leur plaît, en se plaçant sous ces règlements de voyage d'affaires, sans que leur quota annuel de \$150.00, qui leur est alloué pour des voyages de plaisir, soit entamé. Dans l'intérêt des membres de la profession, ces règlements, ci-haut énumérés, doivent être suivis à la lettre.

Le Corps d'Entraînement des Officiers Canadiens.

Les étudiants en Chirurgie Dentaire sont éligibles pour l'enrôlement dans le C.O.T.C. du Corps Dentaire Royal Canadien. Le choix se fait parmi les élèves de première année d'une faculté dentaire, à condition qu'ils aient complété leurs qualifications pré-dentaires requises par leur Université respective.

Les officiers-cadets du Corps Dentaire reçoivent leur formation théorique durant leur première, deuxième et troisième années. Durant les vacances d'été, trois périodes d'entraînement pratique sont organisées comme suit:

1) Deux périodes d'été sont passées à l'École d'Infanterie Royale Canadienne. A la fin de ces deux périodes, le candidat reçoit sa commission de lieutenant (Corps de Réserve), s'il a conservé les points requis.

2) Une troisième période, sous la direction exclusive du Corps Dentaire, est subdivisée de la façon suivante:

a) Un cours de quatre semaines à l'École du Corps Dentaire, à Ottawa.

b) Un cours de douze semaines, ré-

parti dans différentes cliniques du Corps Dentaire, partout au Canada, considéré comme un internat pratique. Cette dernière partie du cours est modelé sur l'internat requis par la faculté de Chirurgie Dentaire de l'Université de Toronto. L'officier dentaire, en charge de la clinique, agit comme instructeur auprès du cadet, le surveille et l'assiste à son travail au fauteuil.

À la fin de cette troisième période, l'étudiant se qualifie pour une commission de lieutenant (Force Active) ou pour une commission de capitaine (Corps de Réserve). Cette organisation du C.O.T.C. est appelée à remplir environ la moitié des exigences présentes et futures d'officiers dentaires pour l'Armée Canadienne, Force Active ou Corps de Réserve. Les officiers-cadets, enrôlés dans le C.O.T.C., reçoivent un entraînement progressif de sciences militaires et dentaires, entraînement, qui leur permet de se qualifier comme officiers, à la fin de cet entraînement.

Exemption de taxe sur les brosses à dents.

La brosse à dents était au nombre des articles de toilette taxés par la nouvelle loi du 17 novembre 1947. L'impôt de 25% signifiait une augmentation du prix des brosses pour le public. L'Association a immédiatement entrepris des démarches auprès des autorités pour soustraire les brosses à dents de ce nouvel impôt, insistant sur la nécessité de cet article pour maintenir la santé dentaire des populations. Un autre argument invoqué était le fait que 95% des brosses à dents sont fabriquées au Canada.

Cette demande fut agréée par le Ministre du Revenu National et le 7 décembre, il annonçait que les brosses à dents cessaient d'être taxées.

Retard du Journal.

Le Comité des Publications regrette que le Journal ait été en retard, en plusieurs occasions, cette année. Cette situation échappe complètement au contrôle du Comité et peut durer encore pour quelques livraisons.

La cause de cet état de choses réside dans le fait que l'union des imprimeurs a posé aux éditeurs des conditions de travail, que ceux-ci ne peuvent accorder. L'entente entre les patrons et les ouvriers se terminait le 30 septembre 1947. En attendant la rédaction d'un nouveau contrat, le travail s'est effectué dans des conditions difficiles. Ces différents ouvriers se répercutent dans toutes les établissements d'imprimerie de la région et menace de s'étendre dans tout le Canada. Le coût de la publication augmente rapidement. Deux augmentations de 20% furent supportées par l'Association, l'an dernier, et il est probable qu'une autre majoration considérable des prix est imminente dans un avenir rapproché.

Une grève s'est déclarée, au début de décembre, et quelques numéros du Journal devront être retardés. Quelques publications ont déjà annulé leur livraison de décembre. Le Comité tient à tout prix à publier tous les numéros du Journal et ce n'est que des circonstances absolument incontrôlables qui le forceront à remettre une livraison du Journal.

Demande de correspondance.

Plusieurs dentistes européens nous écrivent pour nous exprimer leur grand désir de correspondre avec des dentistes canadiens. Ils nous disent avoir été privés, depuis 1939, des progrès, qui se sont réalisés dans la science dentaire.

Plusieurs de ces confrères désirent entrer en relation avec un confrère canadien pour échanger des lettres et des articles scientifiques.

Le docteur F. Straub, Gevelsberg 1. W. Mittelstrabe 19, aimerait avoir un correspondant au Canada.

Nécrologie.

À Montréal, à l'âge de 60 ans et onze mois, est décédé le docteur Pierre-Albert Fortier, dans le cours du mois de décembre. Le docteur Fortier avait été admis à la pratique en 1908 et avait d'abord débuté à S.-Georges de Beauce, pour ensuite s'établir à Montréal, d'une façon définitive.

Nos sympathies à sa famille.

Nécrologie.

Le docteur Louis J. Franchère est mort, le 2 décembre 1947, âgé de 78 ans.

Durant toute sa vie, il a lutté pour que l'étiquette professionnelle soit respectée. Amoureux de sa profession, il eut voulu que tous ses confrères partagent ses idées; c'est l'explication de ses phillipiques. Parler en faveur de l'annonce, de certains dentistes, qui commercialisaient leur profession, des droits des odonto-techniciens, étaient des sujets, qui l'horripilaient.

Licencié en 1893, (trois diplômés de cette promotion sont encore vivants: Arthur Lemieux, Gustave Lemieux et W. O. Pichette, de Sorel,), il fut nommé immédiatement démonstrateur du Collège Dentaire de l'Association, dont il fut secrétaire, alors que le docteur J. H. Bourdon avait remplacé le docteur W. George Beers, à la présidence, en 1896. En 1904,

à la fondation de l'Ecole Dentaire Laval, nous le trouvons professeur titulaire de matière médicale, plus tard professeur d'histoire dentaire. A sa mort, il était professeur honoraire de la Faculté de Chirurgie Dentaire de l'Université de Montréal.

En 1906, il fut président de la Société d'Odontologie Canadienne-Française.

Nécrologie.

Le 9 décembre 1947, est décédé le docteur Henri Saint-Onge, à l'âge de 50 ans. Ce confrère était né à Valleyfield, en 1896, avait fait ses études au Collège Ste-Marie de Montréal et à la faculté de Chirurgie Dentaire de l'Université de Montréal. Il avait été admis à la pratique de l'art dentaire en 1917 et avait exercé toute sa carrière à Montréal.

Nos sympathies à sa famille.

(Nous devons ces notes biographiques au docteur Paul-E. Poitras)

Encore des rapports sur le fluor

Depuis deux ans, la ville de Newburg, N. Y., emploie le fluor dans l'eau de l'aqueduc municipal. Le directeur du Service de Santé de cette ville vient de publier les premiers rapports sur les bénéfices tirés de cette expérience par les dents des enfants de cette municipalité.

Les enfants de Newburg ont moins de bactéries (*lactobacille acidophile*) dans leur bouche, depuis l'emploi du fluor; tandis que les enfants d'une ville voisine, Kingston, dans le même état, où le fluor n'est pas utilisé, ont considérablement plus de bacilles dans leur bouche.

Le Service de Santé de l'Etat de New York mène, dans ces deux villes, des expériences pour étudier l'effet de l'addition du fluor à l'eau potable sur la carie dentaire et ces recherches dureront dix ans. La rapport, qui vient d'être publié, est le premier d'une série pour élucider ce problème.

La teneur moyenne de bactéries, dans une bouche susceptible à la carie dentaire, est de 20,000 par centimètre cube de salive. Chez les personnes, qui n'ont pas ou presque pas de dents, la teneur de bacilles est moins de 100, par centimètre cube de salive.

Avant l'expérience de Newburg, les enfants de cette ville, dans une proportion de 63.5 pour cent, avaient environ 20,000 bactéries par cc. de salive. Ce pourcentage est descendu à 55.2, une année après le début de l'expérience. L'année suivante, il baissait à 47.3. Entretemps, il n'y eût pas de baisse à Kingston, où le fluor n'est pas employé. Cependant la quantité de bactéries, dans Kingston, n'a jamais été aussi élevée qu'à Newburg, avant le début de l'expérience. A Kingston, la moyenne se maintient à 55 pour cent.

Les recherches continuent, parce que les effets du fluor sur les dents des enfants se manifestent lentement.

On ne semble pas encore fixé sur les avantages, que peuvent tirer les adultes, d'un traitement de l'eau au fluor.



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● This is where the dentists of Canada will meet June 20 to 24, 1948. You will fall in love with this championship golf course at first sight. You just won't be able to resist the sheer excitement of the place, so arrange now to attend our National Convention at Murray Bay in June.



PRAYER OF AN AMERICAN ADMIRAL

Give us the courage to accept with equanimity the things in life which cannot be altered. Give us the strength to alter those things which can and should be altered, and give us the wisdom to distinguish between the two.





JOHNSTON W. ABRAHAM, D.D.S.
Montreal, Quebec.

President Montreal Dental Club.
Veteran of World War I, decorated with Military Medal.
Graduate of McGill Faculty of Dentistry, 1923.
Charter President of Rotary Club.
Governor of College of Dental Surgeons for the
Province of Quebec.
Veteran of World War II, A.D.D.S., Lieut. Col.
Interested in Home and School Association, Church,
Community Council, Curling and Skiing.



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THE BRITISH HEALTH SERVICE ACTS AND THE DENTAL PROFESSION

From a Correspondent in Britain

THE National Health Service Act and the corresponding Act relating to Scotland are due to come into operation on July 5 of this year and by the time this article appears it is probable that a similar Act will have been passed by the Parliament of Northern Ireland. This latter Act will possibly differ in some respects from the main Acts but the general outline of the services to be provided under it will not depart to any material extent from that laid down in the major Acts.

THE SCOPE OF THE ACTS

It is important to remember that the plan embodied in the Acts is not an insurance scheme. Hitherto, both medical and dental benefit have been available only to persons insured under the National Health Insurance Acts, that is, to all manual workers and non-manual workers whose salary did not exceed £420 per annum—there being no provision for the insurance of the wives and other dependants of the persons who were insured. Under the new scheme all limitations are to be swept away and the services to be provided under the Acts will be available to everyone—men, women and children—without any limitations, financial or otherwise. The only link between the National Insurance scheme and the Health Service will be that a sum of

approximately £32,000,000 will be contributed from the Insurance Fund to the Health Service. This contribution will only provide a fraction of the cost of the services to be provided under the Health Acts and the balance will be found from general taxation and local rates—preponderately by the former.

With certain minor exceptions persons availing themselves of the services to be provided will not be called upon to pay any fees or charges for them. It is in this sense that the Service has been described as "free" but it will be realized that everyone other than children will be paying directly or indirectly for the service either through taxes and rates or through the National Insurance scheme, which will be applicable to a very much wider section of the population than was the old National Health Insurance scheme since everyone, other than dependants, will be compulsorily insured. On the other hand, there is no compulsion on any person, insured or not, to avail themselves of the services provided under the Acts and doctors and dentists are left free to take part in the service or to remain in uncontrolled private practice. Further, a doctor or dentist who is not in a whole-time salaried post and who elects to take part in the general medical or dental service will not be debarred from also carrying on a certain amount of private practice. This

point will be dealt with more fully in later paragraphs.

ORGANIZATION OF THE SERVICES

The dental services to be provided under the Acts fall into three categories: Hospital Services, Priority Services and the General Dental Service.

Hospital Services. All hospitals, whether general or special, with the exception of hospitals attached to teaching schools, are to be taken over by the Minister of Health in England, the Secretary of State for Scotland and in Northern Ireland by a new body, the Northern Ireland Hospitals Authority. The description of the organization which follows relates to the position in England, but although there are minor differences of organization in Scotland and Northern Ireland, broadly speaking it may be taken as descriptive of the general position.

The hospitals in England are being organized in fourteen regions, each governed by a Regional Hospital Board which is responsible for planning a co-ordinated hospital service for the area. These regions are based on a university or medical teaching hospital, the intention being that every type of hospital service, specialist and consultant, in-patient and out-patient, shall be readily available in the area. There is no provision for the special representation of the dental profession on the Regional Hospital Boards but dentists have been appointed to six of them. The individual hospitals in the regions will be controlled by Boards of Management to be set up by the Regional Boards. The constitution of these Managing Committees includes "persons appointed after consultation with the senior medical and dental staff employed at the hospital". It seems safe to assume, therefore, that the dental profession will be represented on them. Medical and dental teaching hospitals are to be managed by Boards of Governors appointed in a different way from those of other hospitals but they will take their place in the general hospital plan of the region in which they are situated.

It will be seen that under this scheme it will be possible to provide for all types of dental treatment to be undertaken in both dental and general hospitals. There can be little doubt that under the scheme there will be a very considerable expansion in the provision for the treatment of special dental conditions. Furthermore, it seems certain that the reorganization will lead to an increasing measure of co-operation between the medical and surgical staff and dental surgeons in the treatment given in the hospitals.

In the past the dental service given at a large number of the general hospitals in the country has been confined to the extraction of teeth for persons who could not afford private fees, the treatment being carried out by honorary dental surgeons to the hospitals. Under the new scheme there will no longer be any need for the hospitals to provide this particular kind of treatment, since these patients will be able to obtain it free of cost from a practitioner in the general dental service. It seems certain, however, that there will be a considerable extension of the system of giving general dental treatment to in-patients who have to be in hospital for any length of time or whose general condition calls for such treatment.

Dental surgeons appointed to hospitals will no longer give their services but will be paid salaries, either whole or part-time, by the Regional Hospital Boards or Boards of Governors. It can safely be said that the hospital part of the scheme commends itself to the profession as opening the way to a considerable development of the services which it can render in the treatment of disease.

The Priority Services. Priority for dental treatment is to be given to expectant mothers and children, it being recognized that any satisfactory scheme of national dental service must be based on the efficient conservative treatment of these classes. The Education Act, 1944, placed local education authorities under an obligation to provide dental inspection for all the chil-

dren for whom they are responsible and to ensure that facilities are available for the free treatment of any defects found at such examinations. Thus provision has already been made for this section of the "priority classes". The Health Service Act lays it down that "It shall be the duty of every local health authority (a different body from the local education authority) to make arrangements for the care, including in particular dental care, of expectant and nursing mothers and of children who have not attained the age of five years and not attending primary schools maintained by a local education authority". When this part of the Act is in full operation organized provision will have been made for complete dental treatment for the whole of these important sections of the community. It will, however, be some time before these services are completely manned. It is doubtful whether the school dental service has much more than one-third of the number of dental officers that will be necessary for the provision of complete treatment for the children of school age. The maternity and child welfare schemes are even more seriously undermanned and authorities are already finding it increasingly difficult to attract suitable recruits, or indeed any at all, to their dental services. The poor salaries paid by local authorities in the past is in some measure responsible for this state of affairs but the fundamental difficulty is the general shortage of recruits to the profession which resulted from the reduction in the number of entrants to the dental schools during the war years. It is hoped that the salaries position will be improved as a result of the enquiry that is now being undertaken into the level of remuneration of the profession by a committee of which Sir Will Spens is chairman. It is noteworthy, in this connection, that the National Health Service Act gives the Minister the power to lay down the conditions under which any officer is to be employed by local authorities under the Act. This gives the Ministry the power which it has hitherto lacked to compel backward

authorities to pay adequate salaries.

As regards the priority classes, therefore, the organization is in being and as the personnel is increased, the demand for treatment will be stimulated and in time should begin to overtake the need for it. When that stage is reached, it will be possible to look forward to attainment of the ideal of a dentally healthy nation.

Before leaving the subject of the "priority classes" it should perhaps be explained that there is no compulsion upon any of the persons included in these classes to obtain treatment under the schemes organized by the local authorities. They, in common with the rest of the population, are free either to obtain such treatment from a practitioner in the general dental service, in which case they will not be called upon to make any payment, or, if they are prepared to pay his fee from their own pockets, from a private practitioner.

The General Dental Service. As has already been indicated, there is a general measure of agreement throughout the profession with the proposals with respect to the hospital services and the priority classes. This, however, is far from being the case with regard to the general dental service. The actual regulations which will govern the service have not yet been made public but enough is known of their general tenor to make it evident that they involve drastic changes in the traditional methods of conducting practice. It is, therefore, not surprising that this part of the scheme has been the subject of a considerable amount of criticism. As was inevitable, some of this owes its origin to an imperfect understanding of the actual proposals of the Government, but the greater part is founded on misgivings as to the effect these will have on the standard of dentistry to be provided under the service and, consequently, on the general standard of practice in Great Britain.

The scheme for the general dental service provides that all persons are to be entitled to choose the dentist by whom they wish to be treated and con-

versely every dentist taking part in the service will equally be entitled to refuse to accept any particular patients. Treatment will be given either at a "Health Centre" or in the private surgery of a practitioner. Dentists working in a health centre will be paid by salary and may be employed either whole or part-time. Dentists working in their own surgeries will, on the other hand, be paid on a uniform scale of fees covering all the usual items of treatment.

The Government has made it clear that its ultimate objective is the establishment all over the country of a sufficient number of health centres to meet the dental needs of the community. In other words, their hope is that in time the whole of the general dental service will be staffed by salaried officers. It is realized, however, that it will only be possible to reach that objective by gradual stages. At present it would be impossible either to obtain sufficient dentists who would be willing to undertake salaried service or to build or adapt premises for more than a small number of centres. For a considerable number of years, therefore, the Government will, perforce, have to rely on the services of private practitioners working in their own surgeries to provide the necessary treatment. Ultimately there may emerge a system in which private practice and health centre practice will exist side by side.

Dentists in private practice who elect to take part in the Health Service, either in health centres or in their own surgeries, will be allowed to treat patients privately and charge fees for so doing. Patients, however, who elect to obtain treatment and pay for it themselves will not be able to claim any benefit under the scheme. Nevertheless, it seems likely that, for the time being at any rate, a not inconsiderable number of patients will prefer to obtain treatment on the basis to which they have been accustomed rather than avail themselves of the facilities offered in the Health Service. It is, moreover, reasonably certain that,

unless the Government modify the scheme by accepting the principle of Grant-in-Aid, the majority of dentists working in better class practices will prefer to remain entirely outside the service. What proportion of the profession will in the long run find it possible to do so will depend upon the reaction of the population to the new scheme. In this connection it must be borne in mind that free education and public libraries have not yet put the private schools (particularly the big "Public Schools") and private libraries out of business. These exceptions apart, it may be assumed that dentists in industrial practice and those with a mixed clientele will feel compelled to accept service, at any rate in respect of the majority of their patients. Those in purely industrial practices will probably stand to gain financially by accepting service under the Act since the Government are almost certain to offer a higher standard of remuneration than has hitherto obtained under the old National Health Insurance Dental Benefit Regulations. Practitioners with mixed practices, however, will not find it so easy to decide whether to accept service in respect of any, some or all of their patients. The level of remuneration may well be the deciding factor in some cases, but in many more financial considerations will not count for so much when set against the prospect of losing some measure of professional freedom.

A short résumé of conditions which it is understood are to be incorporated in the Regulations governing the Service will enable your readers to appreciate the difficulties with which members of the profession in Great Britain will be faced.

Fees — For all ordinary operations and dentures the fees payable to a dentist will be fixed by a common scale which will be applicable to every dentist taking part in the service.

Special fees may be allowed in certain cases in which special treatment is necessary, e.g., where it is essential that a metal denture should be provided or a gold inlay

be inserted. In addition, patients are to be allowed to make extra payments, on a scale fixed by Regulations, "in respect of the supply of any dental . . . appliance which is, at the request of the person supplied, of a more expensive type than the prescribed type" and there is a similar provision with respect to "treatment". This means that a patient, for whom a vulcanite or plastic denture would be suitable, but who wishes to have a gold denture, will be permitted to pay an extra charge out of his own pocket. Similarly with gold or porcelain inlays where it is decided that a plastic filling would ordinarily be all that is "necessary".

In each case in which a special fee is to be charged it would be necessary for the dentist undertaking the work to obtain permission from the central authority.

Estimates.—When a patient presents for treatment the dentist will be required to make a chart of the mouth showing all the treatment which, in his opinion, is required and, if the patient is not prepared to undergo the whole of this, the treatment which the patient is prepared to accept must be shown.

When conservative treatment only is required the dentist may proceed to carry this out without obtaining prior approval. When, however, extractions (other than emergency extractions for the relief of pain or other urgent symptoms) are required, or dentures are necessary, an estimate of the necessary work must be sent to the Dental Estimates Board and the treatment cannot be commenced until the estimate has been authorized by them. This provision also applies to all cases in which special fees are chargeable.

The Dental Estimates Board is a new body to be set up under the Act. It will be responsible for the approval of estimates and for sanctioning the payment of dentists' accounts. The Act provides that the Chairman and a majority of the members of the Board shall be dental practitioners. It is understood that the actual composition of the Board will be a chairman, who will be whole-time, four whole-time dental practitioners and two dental and two lay members, part-time.

It is obvious that the smooth working of the scheme will depend in no

small measure on the manner in which this new body discharges its responsibilities. It has been calculated that the Board will have to deal with approximately 10,000 estimates daily. Some of these will be for conservative treatment and will only need to be checked before payment is authorized. Others will all need to be scrutinized to some extent by the clerical staff and a percentage be referred to members of the Board or their immediate assistants, who will probably also be dentists.

A proportion of the estimates will need to be referred to the Dental Officers of the Ministry of Health for a second opinion. It is probable, too, that a proportion of completed estimates will also be referred for examination in order to ascertain if the treatment has been carried out in a satisfactory manner.

That in rough outline is the scheme enshrined in the Act and the Regulations to be made under it. There are a whole series of Regulations dealing with complaints and differences of opinion but it is unnecessary to go into those beyond saying that reasonable provision has been made for the representation of the profession on all bodies which will be concerned with the conduct of dentists taking part in the service. The one major criticism of the provisions dealing with discipline is that when the tribunal has decided that a dentist should be dismissed from the Service his final appeal lies to the Minister of Health and not, as the profession wishes, to the High Court of Justice.

OBJECTIONS TO THE SCHEME

The main ground on which the scheme is opposed, is that under it, every dentist whether he is good, bad or indifferent; inexperienced, or has had many years of experience in practice; whether he is a slow painstaking operator, or a quick and possibly careless one, is to be paid exactly the same fee for each operation. And, moreover, there is no prospect of his being able to command higher fees as he becomes

more experienced in his profession; nor is there any provision for any variation in fees to offset the inevitable differences in the overhead expenses of differing types of practices. This levelling of fees, taken in conjunction with the provisions which require that every estimate for treatment other than "standard treatment" will need to be specially authorized by the Dental Estimates Board, it is felt will lead to a steady deterioration in the standard of dentistry. Dentists, it is thought, will have no incentive to improve their methods and will be content to confine themselves to simple routine dentistry rather than enter into correspondence in order to secure approval for estimates for special treatment. This argument is possibly overstressed, but it undoubtedly represents the feelings of a considerable section of the profession.

The British Dental Association has from the first pressed for the adoption of a system of Grant-in-Aid. Under this system each dentist would be free to arrange his own fees with his patient and the patient would recover from the Health Service the standard fee laid down in the Regulations. It is argued that with a flexible system of this kind the poorer sections of the community would have no difficulty in obtaining free treatment and that those who could afford to pay for a better class of treatment or greater amenities would not be deprived of the benefit towards the cost of which they were contributing, directly through the insurance scheme and indirectly through national taxes and local rates. It is further argued that a scheme of this kind would be truly national since there would be no inducement for either dentists or patients not to take part in it. These arguments have, however, had no effect on the Government, who have set their faces against any differentiation in fees, presumably on the ground that the payment of extra fees would lead to discrimination against those who could not afford them and so cut at the basis on which the National Service is found-

ed—that the best possible treatment should be available to every person without regard to his or her ability to pay for it. There does not appear to be any likelihood of the Government receding from the position they have taken up, particularly as the medical profession has tacitly accepted the principle of an equal capitation rate applicable to all doctors in the general medical service and to all patients. The result will probably be, as I have already said, that a considerable section of the dental profession will elect to remain outside the national scheme. It is, moreover, probable that the British Dental Association will decide not to recommend the scheme to their members. Whether they will go a step further and recommend them not to take part in it still remains to be seen.

The second important ground of objection to the scheme is that the prior approval of estimates may lead to a loss of clinical freedom, as the Dental Estimates Board may require any estimate to be referred to a Dental Officer of the Ministry of Health who may not approve the line of treatment recommended by the dentist. The opinion of the dental officer is not necessarily conclusive; the dentist has the right to appeal against it to a professional body. All that, however, means trouble and correspondence and the fear is that dentists will prefer to take the easy way of only recommending treatment which is certain to be approved. This again, it is felt, will tend to produce an insidious lowering of professional standards quite apart from the objectionable undermining of the mutual confidence which should exist between the individual dentist and his patient. How far these fears will be justified will depend upon the manner in which the Dental Estimates Board discharges its important function in the scheme. Being predominantly a professional body it can at least be expected to be more sympathetic towards professional considerations that were the Approved Societies under the old dispensation.

CONCLUSION

It seems certain that the Government will not concede any of the major points on which the profession has taken exception to the scheme. In that event the dentists in general practice in Great Britain will be divided into four sections with a certain amount of overlapping between some of the sections. These will be (1) Salaried dental officers working for the "priority classes" and in Health Centres in the general dental service; (2) Dentists working in their own surgeries whose practices will consist wholly of treatment given under the National Health Service; (3) Dentists working in their own surgeries who will treat some patients under the Health Services and others as private patients and (4) Dentists who will not accept any patients under the Health Service. This last class will at first almost certainly contain the great bulk of practitioners in better class practices.

It is difficult to form any estimate as to the proportion of dentists who will

elect to take part in the service until the actual terms of remuneration to be offered by the Government are known, but it may be expected that most dentists in middle class and industrial practices will feel compelled to accept service in respect of some, if not all, of their patients.

That the scheme is viewed with very considerable misgiving may be taken for granted. The extent to which those misgivings will be justified by events will obviously depend on the manner in which the Dental Estimates Board discharge their responsibility. Emphasis has necessarily been laid on the objections to the scheme put forward by the Government. This must not be taken to imply that the profession is not wholeheartedly in favour of the principle underlying the scheme that no person should be prevented by financial reasons from obtaining whatever treatment is necessary to secure complete dental health. For this reason the profession supports the plan for the treatment of the priority classes by a salaried service.

It must be remembered that osteoarthritis which is so common as the result of previous trauma, previous arthritis, and occupational stresses, is the arthritis of old age. It is a degenerative condition and no cure can be expected. The old understand this if it is explained to them, but neglect of this may cause them much heartburing and expense in their attempt to find one. Relief from their pain and disability can be offered them even of fixation of a joint with arthrodesis is needed. Focal sepsis plays no part in the arthritis of the aged, and a search for it and eradication of suspected sources are a waste of time and unjustifiable interference.—Charles Baker, O.B.E., M.D., in Guy's Hospital Gazette.

Tomorrow a stranger will say with masterly good sense precisely what we have thought and felt all the time, and we shall be forced to take with shame our own opinion from another.—Ralph Waldo Emerson.

Advice is seldom welcome; and those who want it the most always like it the least.—Earl of Chesterfield.

SOME NEGLECTED ESSENTIALS FOR REMOVABLE PARTIAL DENTURE FUNCTION*

by VICTOR L. STEFFEL, D.D.S., F.A.C.D., Columbus, Ohio

IN no direction of endeavour is the truth of the axiom more manifest than in Removable Partial Denture procedures, that it is no more difficult to do a thing correctly than incorrectly—the right way than the short-cut, haphazard way. Taking into consideration the thrill of quality achievement, and the avoidance of adjustments to the comfortable, smooth functioning result, in removable partial work, it is even less trouble, in the end, to carry through each step the painstaking orthodox way.

However, the history of Removable Partial records far too many failures. And, unfortunately, these undesirable end results have often come about through the simple neglect of, or the omission of, one or more seemingly unimportant items in the plan of procedure. The removable partial denture phase of dentistry suffers the shameful distinction of being the most neglected and most abused of all dentistry's subdivisions. This fact is regrettable, and needs not continue to exist.

Some of the sins of omission leading up to this status of Removable Partial Dentures are: lack of careful diagnosis, using study models and well defined radiograms; failure of the dentist to personally survey and design cases before having them fabricated by the technician; a neglect of the application of the broad fundamental principles of leverage in design; improper distribution and reduction of destructive forces, to convert them for physiologic stimulation; an indifference to the absolute necessity of centric relation; an almost wholesale dispensing with the preparations of the mouth for final impressions; an ignorance of the necessity for "denture movement" in function, and the im-

portance of a balanced occlusion; and the careless assumption that the patient taking delivery of his partial knows fully how to use and care for it.

STEPS MOST OFTEN NEGLECTED

The step in removable partial procedures most often neglected or dropped altogether is the "preparation of the mouth, or alterations, before taking final impressions". Under this heading, the following fall: The making of full crowns to restore posterior abutments which are already carious at the gingival; the correcting by grinding, or with restorations, of teeth which are leaning or over-contoured; the preparing of rest areas with positive seats for occlusal stops, either in the tooth structure or in metallic restorations; the reducing of interfering ridge convexities and bulbous tuberosities; the balancing of the natural occlusion, so that the artificial occlusion can be harmonized with it; the placing of complete crowns with proper contour for clasping on posterior teeth whose surfaces converge occlusally; the crowning or inlaying of teeth with excessive long-axis inclinations, to provide alignment in harmony with other teeth; the reducing surgically of hypertrophied or bulging gingival tissue about teeth to be clasped; the removing of a torus mandibularis to make room for a lingual bar; and finally, a thorough prophylaxis. At least two of the above named requisites are *always necessary*—the preparing of properly shaped occlusal stop areas and the meticulous cleaning of the teeth.

At the outset, it cannot be over-emphasized that a most careful diagnosis is a prerequisite to any form of treatment — and the results ultimately obtained will directly reflect that

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meticulous diagnosis. Many cases end in the discard merely because of our not having carefully measured the problem. Our thorough consideration of any case will determine, first of all, what is best for the patient; then, secondly, how best to accomplish the treatment of choice. Judicious diagnosis, planning, and consultation, beget patient confidence.

Partial denture service, correctly rendered, is difficult. However, partial denture prosthesis is definitely a responsibility of the dental profession: we cannot dodge the issue merely because of its complexities. Also, we cannot deny the necessity for this type of service, as evidenced by the edentulous spaces in the dental arches of those patients who frequent our offices. Furthermore, oftentimes no other type of restorative dentistry provides nearly so efficient a vehicle of function as does the removable partial. Consequently, it becomes our duty to know the difference between a removable appliance which "treats" the mouth, and one which "wrecks" the mouth.

We who render this service must constantly remind ourselves that, in our enthusiasm, we should not promise the impossible. The masticatory apparatus is broken down and crippled when it comes to us, so let us not make a prognosis equal to, or better than, normal. If the problems to be met in design and treatment were wholly mechanical, a complete restoration of function might be predicted. But the mechanical phases must be subordinated to the biologic. The success of a case is largely dependent upon biologic response. Favourable response of the living tissues over a period of time necessitates our recognition of slight denture movement while in function, accepting this movement, then controlling and converting it to favourable physiologic stimulation instead of trauma. Every application of a mechanical principle must be made with sane judgement with reference to the ability of the various living tissues to accept the movement and stresses imposed on them.

Proper design and adequate support, therefore, are of prime importance, much more critical to partial denture function and success than the specific materials of which partials are made.

PLANNING OF THE APPLIANCE

The planning of the appliance should give consideration to enhancement of general health of the patient, the oral health of the patient, the aesthetic improvement, the masticatory efficiency and especially the preservation of the remaining teeth and other supporting structures. Partial denture construction is not the replacement of teeth just to span a gap.

The design and construction of a partial denture should not be left to a remotely located laboratory technician, who has no knowledge of the case beyond the stone cast before him. He cannot work intelligently from such meagre data. The anatomic structures, teeth, mucus membrane and bony support, constitute the denture foundation, for lasting stability. If any of these structures is ignored in planning, the case is doomed shortly to lose the very advantages for which the restoration was made: namely, masticating efficiency, a correct maxillomandibular relationship, aesthetic values and preservation of supporting tissues. Only the dentist himself, who sees the arch into which a partial appliance is to be inserted, possesses an essential knowledge of the living tissues and can reach the ideal solution to the biomechanical problem.

In planning these cases, always think of a removable partial denture as a permanent appliance. If properly constructed it should function indefinitely and its use by the patient should postpone further loss of additional teeth. These appliances fall into two main classes: (1) all tooth supported and (2) those supported by both the teeth and the edentulous ridge. The first class should present no great difficulty as compared with the second type; it should however be rigidly constructed and well supported on the teeth.

The second type of partial denture is

well illustrated in the lower lingual bar case where all the posterior lower teeth are missing. Excessive tissue resorption and consequent change in form of the ridge results in settling of this type of denture. This settling, in turn, may exert excessive strain on the attachment teeth if allowed to proceed too far before rebasing. Accordingly, a patient for whom such a partial denture has been constructed should never be discharged permanently as "having been cured of all the ills which beset the teeth." Periodic checkups will prevent well-designed cases of this type from falling into the category of mouth wreckers. This extension saddle type of prosthesis has often so discouraged excellent dental operators that they have advised their patients against its use. Such action is regrettable. Failure of such cases is generally the result of faulty design. Again, the practice of advising the extraction of the lower anterior teeth when a full upper denture is to be worn is likewise regrettable. These teeth, when sound, should be retained, as they will be stimulated and their life prolonged by the application of correct principles of clasp denture design.

RETENTION OF ANTERIOR TEETH

While it is strongly urged that lower anterior teeth or any other strong, lower teeth be saved to provide stability and support for a clasp denture, it is seldom, if ever, advisable to retain upper teeth when only five or six anterior teeth remain. Embracing for one arch what is condemned for the other at first thought seems a contradiction; but this is not the case. In the lower arch, ridge support is poor. The denture has a tendency to skid forward, due to muscle pull and to the mesial slope of the posterior part of the ridge. A free riding denture has a tendency to dislodge and move laterally in the lower jaw; and there is inadequate tissue coverage as compared with the upper arch. Therefore, the remaining teeth supplement the other support of the artificial denture similarly to Nature's original denture. In the upper arch large tuberosi-

ties, broad ridges, larger arch size, more resilient tissues, more abundant blood supply and a much greater tissue area for denture coverage and support make a full denture quite self-sufficient without the aid of remaining anterior natural teeth. Also, from an aesthetic and a mechanical standpoint, extraction of the few remaining upper anterior teeth is generally, though not always, indicated.

UTILIZATION OF RIDGE SUPPORT

In consideration of extension saddle cases, involving tooth support and engagement combined with ridge support, a controversy confronts us that has engaged the attention of partial denture prosthetists for years. No suitable one-piece impression material has ever been discovered or concocted to give proper functional compression of the soft tissues in relation to the dense hard teeth. Hence, the question: How can ridge support be utilized and equalized along with tooth support?

In the literature, much written may be found on this unsettled question. The writers, by the content of their articles, fall roughly into three groups. One group believes in the use of stress breakers or stress equalizers. This group emphasizes the immovability or non-resiliency of teeth in an apical direction as compared with the resiliency of the mucosa, and therefore condemns the rigid connection of clasps to the base and insists on the use of some type of stress-breakers.

A second group agrees in emphasizing the relative immobility of teeth in an apical direction, but denies the necessity of stressbreakers and insists that combination and equalization of saddle and occlusal rest support can be accomplished by some form of physiologic basing. This group favours a few relatively mobile clasps, to be used only for retention.

A third group believes that excessive trauma to both ridges and teeth can be prevented by stress distribution over as many teeth as it may be advisable to engage with rests and rest-supported clasps. In this way, stresses are re-

duced on any one tooth or ridge, as all collectively bear the load. Four teeth carrying a load may be physiologically stimulated to robust health, while two teeth carrying the same load may be overworked and traumatized and become loose.

The extension type of removable denture, chiefly the lower, is the commonest source of trouble, and 80 per cent of the cases are of this type. There is a way of handling this type of case successfully, even though the soft tissues and ridge support in the lower arch are far from ideal. These difficult lower cases, as well as similar upper cases, seem best served by a design in harmony with the third school of thought. Therefore, the requirements are that:

1. The major connectors (lingual or palatal bars) must be rigid, to transmit stresses to teeth and saddle areas of opposite sides.
2. As few teeth as possible should be supplied and these should be narrow buccolingually, to reduce occlusal stresses.
3. Saddles should be as extensive as tissues will permit to fully apply the snowshoe principle of great area coverage.
4. Occlusal harmony must be established to take care of both vertical and horizontal interference. Clasp partial dentures, since they involve natural teeth as well as ridges, should be given at least the same

care as, if not more care than, full dentures in coordinating the occlusion.

5. The denture must have definite tooth support by multiple clasps and occlusal rests. The greater the number of rests, the better the stress distribution.
6. A functional impression or rebasing, though not always necessary, is never undesirable. No denture base ever fits so well that it cannot be made to fit better by rebasing, as this procedure converts the saddle to functional form.

Clasp partial prosthesis is a responsibility of the dental profession. The issue cannot be dodged simply because it is sometimes perplexing. This work cannot be delegated to any other group; and it cannot be denied that there is a definite need for this type of service, as evidenced by the spaces in the dental arches of our patients. Also, in many instances, no other means of occlusal restoration will be nearly so effective as the clasp partial denture. Accordingly it is the duty of every dentist to become so well informed that he can discriminate between those appliances that are "mouth wreckers" and those that will be efficient, therapeutic "vehicles of function". Then he will be able to render the ideal type of partial denture service himself, or be able to write the prescription to be followed by the technician.

19 W. FIFTH AVENUE.

Our aim is not merely to prolong life in terms of years; as has been wittily said: "It is for science not only to add years to life but, more important, to add life to years." There is the crux of our problem—so to control senescence that man's period of useful healthy life is prolonged, whether or not we succeed in increasing his total life-span. And I venture to suggest that such control will come, partly no doubt through study of the many degenerative diseases which more frequently affect old age, but chiefly and most completely through studies of the fundamental processes of cell metabolism and the effect of the nutritional environment on them.—C. P. STEWART, M.Sc., Ph.D., Univ. of Edinburgh.

I recommend you to the care of the minutes; for the hours will take care of themselves.—Earl of Chesterfield.

REVERSE TECHNIQUE FOR THE TREATMENT AND FILLING OF ROOT CANALS

by H. H. PEARSON, D.D.S., Montreal, Canada.

ENDODONTIA is now commanding the interest of a greater number of dentists than hitherto, and holds a prominent place in the monthly programs, and annual meetings of our dental societies. Clinicians are called upon to lecture to ever-increasing audiences anxious to learn the more modern theories and techniques.

Techniques vary according to the types of pulp involved teeth. But the underlying principles are the same, that is, the elimination of the necrotized tissue, the sterilization of the canals and periapical areas, and the hermetically sealing of these canals.

The sterilization may be accomplished by chemical means, by electrolytic

medication, by surgery or by combinations of these three. The following technique is designed to deal with anterior teeth, the crowns of which carry restorations that prevent easy access through the pulp chambers and canals to the apices. They are as follows:—

(a) Any upper or lower anterior tooth that is very narrow and may have one or more approximal fillings very close to the pulp chambers. To open into the pulp chamber and enlarge it for easy access would invite the destruction of such a crown.

(b) A tooth restored with a good porcelain jacket crown well fitting and of good anatomical and colour reproduction. For reasons of pride in this



Fig. 1 (a). Porcelain jacket crown on a preparation restored with a distal gold inlay and mesial silicate filling. Granuloma at apex.



Fig. 1 (b). Taken two years later.



Fig. 2 (a). Male 36, trumpet player. Porcelain jacket crown supported by questionable crown preparation periapical involvement.



Fig. 2 (b). Largest ready made silver cone does not seal apex causing recurrence of periapical infection (taken two months after first operation).

accomplishment and economy, for the patient's benefit, one may avoid cutting into the porcelain and remaining dentine for access and so invite destruction of the crown and preparation.

(c) A tooth bearing a crown or an inlay with a post supported by a post in the pulp chamber and canal. To remove such a post quite frequently results in the destruction of the crown and at times the root as well.

We define Endodontia as the Science which deals with the treatment of pulp involved teeth so as to make them tissue tolerant and functionally serviceable¹. We feel also that the following treatment for the above mentioned types of cases satisfactorily comes within the bounds of this science.

TECHNIQUE

1. All instruments, materials, and medicaments are prepared and sterilized. The patient has been premedicated. The field of operation cleansed

and sterilized and so prepared for the anaesthetic. We use a combination of block and infiltration, that is, the nasoplatine and the subperiosteal labially as described by Harold Maxman².

2. A horizontal incision is made midway between the gingival margin of the teeth and the mucco-buccal fold. This incision includes one tooth on either side of that tooth on which we intend to operate. With a periosteal elevator, the flap is lifted off the lamina dura and retracted beyond the apical area of the teeth and is retained in position with the same elevator.

3. With bone drills or chisels a window is cut in the alveolar plate large enough to expose the apex and the diseased bone tissue. With a No. 558 burr a small segment of the apex of the tooth is excised at an angle that will expose the opening of the root canal to view, and allow for easy access with files and paper points. This root tip and all pathological tissue is then en-



Fig. 2 (c). First silver cone was pushed crownwards, and a hand made silver cone was used to seal the apical opening. (Taken nine months after second operation.)

nucleated with a sharp curette. The bleeding is controlled by the use of an aspirator held by the assistant with the point resting on a small piece of gauze tape held in the roof of the bone aperture. This piece of tape acts as a wick keeping the root end dry and constantly exposed.

4. With files bent at right angles the canal is opened and cleansed, starting with No. 1 and stepping up to the next sizes in sequence to No. 6 or larger as the case requires. Chlorine solutions such as Kerr's Trichlor or Zonite is used to help in the debrisement and sterilization of the canal. The canal is thoroughly cleansed, enlarged and tapered with the wide end towards the apex.

5. From a stock of metal points previously prepared, one is chosen that will fill the canal and thoroughly seal the apex. The canal is again washed and scrubbed with chlorine solution and the largest file. It is dried with paper

points followed by a hot canal plugger. Root canal sealer is prepared and carried into the canal on a plugger, and the metal canal filling is forced into position. The excess is cut off with a fissure burr running contra clockwise. The end of this is burnished thoroughly using considerable pressure which is counteracted by supporting the tooth with the thumb resting on its incisal edge.

6. The bony aperture is thoroughly washed with warm sterile physiological solution to remove all particles of sealer and metal filings. The root end is treated with ammoniacal silver nitrate precipitated with eugenol. The field is again flushed and washed with saline solution. The flap is now returned to its normal position and sutured. X-rays are taken, the patient's comfort is taken care of and he is dismissed with instructions for home care and an appointment for the suture removal (Fig. 1, 2, 3, 4).

In our description of the procedure we refer to a metal filling material without designating what this metal is, because we wish to describe at this time the different types of metal we have used for this purpose.

In the process of cleansing, filing and enlarging the apical opening of the canal with bent instruments, it necessarily follows that the resultant opening cannot be a perfect circle and it was found that most of these openings were larger than the circumference of the largest machine-made silver cone. Hand-made cones of various thicknesses and lengths were prepared from pure silver wire and these were used in several cases but were found to be more rigid and therefore not so easily burnished. Pure gold was then used and found to be more malleable, and easier to manipulate. Further studies were made in order to discover a material that would be tissue tolerant and would more perfectly seal the new apical openings. These qualities were found in a metal called indium. The following is a report of the results of our studies of the use of this material in a



Fig. 3 (a). Lateral and central incisors with periapical involvement.



Fig. 3 (b). Reverse treatment and filling of the central using handmade gold cone, and resection of lateral at same sitting. (Taken two years after operation.)

limited number of cases to date, therefore this report must be considered a preliminary one and not a conclusive one. It is hoped that further research will prove that indium is nearer to the ideal than either silver or gutta percha as a root canal filling material.

PHYSICAL PROPERTIES

Phylbrick and Holmyard³ report that indium is a metal that was discovered in 1863 by Reich and Richter and it is only within recent years that industry and medicine have begun to take cognizance of its possible uses.

It is an elemental metal of silver colour.

Atomic weight	114.76
Specific gravity	7.3
Melting point	155°C
Boiling point	1450°C

It is more ductile than lead, and is untarnished by air and unaffected by water.

It may be cut as easily as soft wax, and burnished without the use of excessive pressure. When placed between

two glass slabs it may be rolled into wires of various thicknesses, using only thumb and finger pressure.

Because of its low melting point, it may be melted with a hot plugger or spreader while in the canal of the tooth. In resection operations the apical excess may easily be burnished or even melted to make a perfect seal. It is opaque to x-rays. Because of its softness it will follow a curve in a canal more readily than a silver point. McCord, Meek and Harrold⁴ report: "Discs of metallic indium were implanted in 15 rabbits subcutaneously intra-abdominally and in the deep back muscles. After a period of 156 days no abnormal manifestations, other than a not remarkable degree of foreign body reaction were observed. There was no evidence of unusual inflammation nor did any organs show signs of any degree of impairment".

The failure to detect other than foreign body reactions to these implanted



Fig. 4 (a). Lateral incisor with post supporting acrylic crown, alveolar abscess.



Fig. 4 (b). Hand made gold cone filling apical opening. (Taken one year later.)

discs suggest scant opportunity for harm to humans, but the possibility of allergic states is not denied.

"The prolonged daily feeding of indium sulphate to rats produced no demonstrable changes at the 58mg./kg level. The equivalent daily dosage in man would be 123 grains."

The implanted discs used in these experiments were made of pure silver with indium impregnated by diffusion or by plating on their surfaces. The reason this method was followed instead of using discs of pure indium may be readily understood when one realizes that indium up to recent times cost \$2472. per ounce. Today because of improved production methods and wider use the near current price per troy ounce is less than \$10.00 or about eight cents per root canal filling.

CONCLUSIONS

Because of its physical properties, indium cones make ideal canal fillings for upper anterior teeth by the direct or the reverse techniques. Tissue tolerance may be considered good, because of its physiologic properties.

BIBLIOGRAPHY

1. Pearson, H. H., Archambault, M.B., Richardson, A.D., "Symposium on Endodontia" presented at the American Association of Endodontia, February, 1947.
2. Maxman, Harold A., Dental Items of Interest 69, 983, 1947.
3. McCord, Meek and Harrold, Journal of Industrial Hygiene and Toxicology, Vol. 25, 6, 1943.
4. Philbrick, F. A., and Holmyard, E. J., Text Book "Theoretical and Organic Chemistry", Publishers J. M. Dent and Sons Ltd., London W.C., England.

DECEMBER 15, 1947.

500 NEW BIRKS BUILDING.

Knowledge may give weight, but accomplishments give lustre, and many more people see than weigh.—Earl of Chesterfield.

THE INTERCEPTION OF MALOCCLUSION

by GEORGE CLARKE, Student in third year Dentistry,
University of Alberta, Edmonton, Alberta.

TODAY more children are seen in the dentist's office than ever before and a question parents frequently ask is, "Will my child have straight teeth when he grows up?" A great deal of incipient malocclusion which the general practitioner of dentistry has ignored in the past requires no orthodontic appliances or only the simplest mechanical aids. To intercept malocclusion a dentist must have a thorough knowledge of growth and development of the teeth and face. Careful observation, the application of correctives at the opportune time, and knowledge of what he can and cannot do will enable him to assist nature successfully. His supervision of growth and his surgical and operative work for children will be done to ultimately bring about the establishment of normal occlusal relationship in the permanent dentition. He will then render his young patients real service and give anxious parents sound advice.

In considering occlusion we are referring to the contacts opposing teeth make when the jaws are brought together. Angle and Lischer have given us a working basis in the classification of malocclusion. Many men have made extensive studies of the contact relationships between opposing teeth and given us a concept of typical occlusion. An ideal occlusion and normal occlusion must not be confused. In the living, changing, vital picture of normal occlusion the ideal is approached to within a reasonable range.

Friel¹ suggested four stages in the vital picture of occlusion:

First: The occlusion of the deciduous teeth after their complete eruption.

Second: The changes that occur in occlusion previous to the eruption of the permanent incisors and first permanent molars and the changes which follow the loss of the deciduous molars.

Third: The occlusion of the permanent teeth in the young adult.

Fourth: The changes which occur in the occlusion as the result of wear.

In the interception of malocclusion the first three are of interest to us but especially let us note the changes that occur after the complete eruption of the deciduous teeth and before complete eruption of the permanent teeth. First to be noted is lateral growth of both arches in the anterior region. In the child of five or six spacing of the anterior deciduous teeth is seen. At the same time forward growth of the whole mandibular arch occurs. This is noted in the five year old by change from overbite to end bite and more forward occlusion of the mandibular second deciduous molar. Sometimes the point of a cuspid interferes with normal development and can be disked off. Later on there is forward movement of the mandibular first permanent molar after loss of the mandibular second deciduous molar. This allows for completion of the occlusion of the mesiolingual cusp of the maxillary first permanent molar in the central fossa of the corresponding mandibular molar; and the occlusion of the mesiobuccal cusp of the maxillary first permanent molar in the buccal groove of the mandibular first permanent molar. This, Angle called the key to occlusion.

PHASES OF GROWTH

Many cases of apparent malocclusion are in effect phases of growth. Conditions in the individual patient that may be classified as malocclusion at one age level may be considered normal at some other age level. For example, Friel has shown that deep overbite in the unworn deciduous denture at age three to four years may disappear as wear of the occluding surfaces of the teeth takes place and the mandible

grows forward. Similarly Broadbent² has described what he terms "the ugly duckling stage". Lewis³ found over fifty percent of cases of normal occlusion in the deciduous denture to show malocclusion during the mixed dentition period. Broadbent, Lewis, Hellman⁴ and others have shown that certain self-corrective changes take place during the mixed dentition stage.

An interesting study by Brodie⁵ on growing children is worthy of consideration. It was found that the lower six year molar is strikingly constant in its relation to the mandible. "Regardless of age, the distance of this tooth to the posterior border of the ramus and to the lower border of the body always yielded a 3 to 2 ratio. The second deciduous first and second permanent molars erupt at an identical distance from the border of the ramus." From studies using alizarin dye and madder it is known that the mandible grows forward by the laying down of new bone on the posterior border of the ramus with corresponding removal of bone on the anterior border. "The first permanent maxillary molar grows almost straight downward until it meets its antagonist. From this time onward it goes downward and forward in a straight line which always bears a fixed angular relation to the cranial base. Furthermore, this tooth is always found on a line connecting the centre of sella turcica with the chin point regardless of age." Proof of the remarkable constancy of this tooth bears out the importance Angle attached to it in his classification. "Evidence points strongly toward a constancy of position of the mandible, which position is maintained by muscle tensions." We often overlook the muscles as factors in malocclusion. "The most important single finding is that the morphogenetic pattern of the head is established by the third month of postnatal life or perhaps earlier and once established it does not change."

Practically all orthodontists agree that the facial growth is forward and downward and that it persists until

the mid-twenties. Most of them recognize spurts of growth although Brodie could not find these. Friel speaks of "springing up" and "filling out" periods, the springing up periods being from birth to one year, from five to seven years, eleven to fifteen years; the filling out periods being from two to five years, seven to eleven years and from fifteen to twenty years. He points out the advantages of beginning treatment as soon as possible after a "filling out" period. Spencer⁶ points out the utter fallacy of instituting mechanical therapy without first establishing the present status of growth and development in the individual and also taking into full consideration all factors which may be retarding desired growth. Growth and development directly in the field of operation cannot be considered properly when careful observation of growth and development of other parts of the individual is excluded. X-rays of the hand and wrist taken every six months or a year give reliable record of growth of bones in the child. However, the mandible being developed from both cartilage and membranous origin is not under quite the same growth control as other bones in the body.

EXAMINATION

Very few dentists examine the patient with the mouth closed, yet this is important if proper arch harmony and cuspal relations are to be noted. Excellent suggestions as to what to examine for and records to be kept are made by both Salzmann⁷ and Spencer⁸. To be useful, examinations should be made each year or better still every six months. One excellent record which can be readily made consists of study casts of the patient's mouth. Impressions can be taken in compound or hydrocolloid and poured up in plaster of Paris. Baker⁹ points out the need for care in getting accurate impressions. A wax bite should also be secured and the models mounted on a simple articulator. McBride¹⁰ points out their usefulness in being able to convince a parent of progress in his child's growth.

As part of a cumulative serial record they are of great use in diagnosing and planning. X-rays are indispensable. Reference has already been made to their use to obtain a growth index and other references to their use will make clear how important they are. As records of his patients build up the dentist uses them in diagnosis and in supervision of his cases. A set of norms should be used in conjunction with records. Hellman recognized that individual differences prevented setting up an absolute standard. He devised a standard to measure "not in numerical units, but in terms of differences", and illustrates its use with interesting case histories. Higley¹⁰ provides a summary of patterns and measurements which can serve as a basis of comparison in evaluating growth and development which he concludes with these words, "Any of these standards must be used with considerable judgment when applied to the individual patient or they will do more harm than good." Spencer stresses arch width and says, "Regardless of adverse arguments, it has been noted that all deciduous dentures which at the age of 4½ to 6 years show a palatal arch width between the first deciduous molars of 28 mm. or more, seldom if ever are handicapped for want of space for normal alignment of the permanent incisor teeth. One should not think this rule is infallible." Again he says, "By keeping ever in mind the most frequent and noticeable symptoms which are present in the three general types of malocclusion, it will be evident that one fundamental need in all of these types is increased arch width of one or both arches. If this be true, one very certain aid toward prevention would be the early elimination of any known factor which tends to retard arch growth."

AETIOLOGY OF MALOCCLUSION

The aetiology of malocclusion is not well known. Causes may be considered as general: such as heredity, endocrine disorders, congenital defects, diet, general health or local: such as thumb-

sucking, lip biting, mouth breathing, early loss of deciduous teeth, early loss of permanent teeth, abnormal retention of deciduous teeth or large permanent teeth.

The dentist will find that casts showing Class I (neutroclusion), Class II (distocclusion), Class III (mesiocclusion) are useful to illustrate to parents the main classes of malocclusion and to serve as a basis to discuss with them individual variations.

The early loss of deciduous teeth is conservatively estimated at causing over 50% of malocclusion. Dr. Don C. Lyons of Jackson, Michigan, in a study of 5,000 children aged 5-12 years places the figures at 65%. Schacter¹¹, in a careful survey in Britain shows it to be well over 50%. In the Porcupine district of Northern Ontario the figures¹² revealed on prematurely missing teeth are:

Age 5 group	46 children out of 172 or 26.7%
Age 6 group	56 children out of 163 or 34.3%
Age 7 group	64 children out of 163 or 39.2%
Age 8 group	73 children out of 157 or 47.0%
Age 9 group	72 children out of 150 or 48.0%

This study reveals also the significant finding that the use of bite-wing x-ray films revealed an average of slightly more than one incipient defect per child over clinical findings without x-ray. To intercept malocclusion it is clear that an attack on this early loss of deciduous teeth must be made.

PREVENTION OF CARIES

The prevention of caries would be the most effective step in saving these teeth from early loss. A study of the aetiology of caries^{9, 13, 14} shows a confusing picture but Bunting and Jay and many workers¹⁵ after them have established that the incidence of caries can be sharply reduced by removing carbohydrates from the diet and substituting milk, proteins, fruits, whole cereals. This change of diet should be recommended to mothers. Proper use of the toothbrush should do much to prevent caries although evidence to support this belief is strangely lacking. However, it is important that the parent and child be properly instructed in its use. Brauer¹⁰ suggests the use

of 2% mercurochrome as a revealing stain to detect whether plaques have been removed from the teeth by proper brushing. This seems to me an excellent suggestion as improper use of the toothbrush can lull the parent and child into a false sense of security against caries. The experiments in the use of fluorine in the community drinking water merit careful consideration. Since our present knowledge does not enable us to prevent caries, proper restorations in deciduous teeth will help prevent their early loss.

Care in cavity preparation is as important in deciduous teeth as in permanent teeth. Willett has contributed much to simplification of restorative techniques and materials for children's dentistry. The chart of cavity preparation by MacGregor¹⁶ shows simple instrumentation that will appeal to the busy dentist. Amalgam is certainly the filling of choice and McBride puts it at the head of his list. Since overhanging margins and improperly contoured proximal walls in Class II preparations can lead to impaction of an erupting permanent tooth, care in adjusting the matrix and finishing the margins is important. The simple T-band matrix is excellent as there is no bulky matrix holder in the child's mouth. Ammoniacal silver nitrate reduced with eugenol is indicated for cavity sterilization and arresting incipient caries. McBride's suggestions for pulp capping or pulpotomy take much of the difficulty out of this phase of restoration. Infected teeth or dead teeth should never be kept in the mouth as space retainers. Two proximating cavities should never be united by a single filling. Jaw growth and tooth eruption is definitely harmed by this malpractice which is occasionally seen. Good restorative work is as necessary for children as for adults.

SPACE MAINTENANCE

Space maintenance is a much discussed question. Orthodontists agree on the importance of study models before a retainer is made. Spencer lists

spaces which may need to be retained owing to premature loss of deciduous teeth, in the order of their importance as:

- (1) Second deciduous molar, either maxillary or mandibular.
- (2) First deciduous mandibular molar.
- (3) First deciduous maxillary molar.
- (4) Deciduous canine.
- (5) Deciduous incisor.

He says, "The need of a space retainer depends upon the presence or stage of eruption of the succeeding permanent tooth. This information can be obtained only through the aid of the x-ray. It is hardly possible to set a definite rule to follow but it will generally be necessary to place a retainer to maintain space for a second deciduous molar if the unerupted premolar has not yet progressed to a point equal to the level of the bifurcation of the roots of the permanent first molar. If it is to this level or above it, it has a fair chance of erupting before the permanent molar tips or moves forward and partially closes the space. One must consider the amount of bone resorption which will be necessary before normal eruption occurs. When there is doubt, a retainer should be placed." MacGregor quotes Dean A. D. A. Mason, of the Faculty of Dentistry, University of Toronto, "The retention of the second deciduous molar is one of the most important factors in the influence of the development of normal occlusion". MacGregor says, "It is my firm belief that if we were to stimulate every dentist in America to take a keen interest in three-year-old children, few six year molars would be lost . . . it is my opinion that there are just as many mouths wrecked from the loss of the second deciduous molar as from that of the six year molar." Cohen¹⁷ says, "The loss of the second deciduous molar, however is a more serious problem. Here we found that nine out of fifteen, or only 60% of mouths where the tooth was prematurely lost, in children ranging in age from three years

and ten months, to eight years and nine months, showed no ill effects with regard to arch development. Forty per cent of the mouths we studied showed closure of spaces. Apparently, the age at which the deciduous tooth is lost has little bearing upon whether or not the space will be retained or lost." MacGregor says, "If a second deciduous molar is lost I personally would always construct a maintainer up to the age of ten and a half years. If lost at this age I would take an x-ray and if it is found that the second permanent molar is contacting the six year molar and more advanced in the process of eruption than the second bicuspid, I would construct a maintainer. If the reverse was found to be true, then the case would be kept under observation until the second bicuspid erupts." He quotes a case to show that chronological age alone is not a good guide and stresses the importance of x-ray in determining whether the second molar is likely to erupt before the second bicuspid. There is probably less harm through premature loss of the first deciduous molars as the first premolar frequently erupts during or soon after the eighth year. The first permanent molar seldom drifts forward as long as the second deciduous molar is retained. Cohen found of the eighteen first deciduous molars lost at the various stages from three years and ten months to eight years and two months, only one of the spaces closed sufficiently to cause the successive permanent tooth to erupt in an abnormal position. Brauer¹⁸ and also Schacter¹¹ do not agree with his findings but place more importance on loss of the first deciduous molar.

MacGregor states that if the first deciduous molar is lost before the eruption of the permanent lateral incisor and the six year molar, a space maintainer should be constructed. If the six year molar is in position but the permanent lateral still not erupted a space maintainer should be constructed. If both the six year molar and the permanent lateral incisor are both in position and the first deciduous molar

lost, then a space maintainer is not necessary. However in any case where a space maintainer is not constructed, the space should be kept under observation. Space retainers for lost maxillary incisors are not indicated. McBride states that for ten years he has not made a spacing appliance for these teeth and from the viewpoint of growth and ultimate expansion of the arch he is quite convinced they are non-indicated. In the lower arch, however, in the event of loss of deciduous incisors, he believes a separate and distinct problem presents and spacing is indicated. The lower arch, not being a definite part of the skull, provides a tendency to greater contraction. Baker says, "If mandibular deciduous incisors are lost prematurely, the dental arch will not grow sufficiently in width to provide space for the permanent incisors and there will be crowding of these teeth. This condition usually induces a narrowing of the maxillary arch with crowding of the teeth and probably excessive overbite."

A space maintainer should maintain the correct mesiodistal width of the lost tooth. It should not be a rigidly attached appliance if it is supported by a tooth on each side. It should not interfere with the eruption of the permanent tooth into the space maintained. MacGregor claims, "Most writers recommend a functional space maintainer. My observations both in practice and clinic lead me to believe that seldom do we find the deciduous teeth exfoliating to any great extent except in cases of multiple extraction." Spencer agrees with this finding. A useful space maintainer, simple in cost and construction, is described by McBride. He calls it the Band-and-Loop spacer and estimates its cost at \$2.00 for material and one and a quarter hours of time. The Willett maintainer fulfils all requirements and is popular. MacGregor describes a new type called the intermaxillary occlusal extension space maintainer. Writers agree that where all the maxillary or mandibular deciduous molars are prematurely lost

a prosthetic appliance should be constructed. Whatever space maintainer is used it must not inhibit the natural growth of the arch.

In supervising the eruption of the permanent teeth the family dentist can intercept malocclusion by early detection and removal of supernumerary teeth. Willett¹⁹ illustrates such a case. X-rays are indispensable here as they are also in the case of congenitally missing teeth. Where these are detected early the best decision to be made seems to be early extraction of the deciduous teeth to promote closing of the space except in the case of congenitally missing upper laterals. A question of space maintenance comes up here until a permanent restoration can be made. If the deciduous lateral can be induced to remain it is the best maintainer from a hygienic point of view.

THUMB SUCKING

When one remembers what gentle forces influence normal tooth growth and position it can be readily appreciated that thumb sucking and finger sucking cause malocclusion. "Malocclusion of the incisor teeth caused by thumb sucking encourages abnormal habits of lips and tongue and mouth breathing. All of these secondary habits tend to persist throughout life and maintain or exaggerate the malocclusion." (Swineheart²⁰). Infants easily acquire the habit and the earlier it is eliminated the better. Lewis and Lehman³ have quite conclusively proven that when the habit has been broken by the fifth year the resultant malocclusion has a tendency to correct itself. Spencer says, "From experience it has often been noticed that if the habit is broken early in life, normal lip function will correct the malpositions of the maxillary incisors, but with patients of six or seven years of age or after the arrival of the permanent incisors mechanical assistance in some form will often be necessary."

The dentist must be ready to advise the parent how to break this habit. Various forms of metal thumb and finger guards or light perforated

aluminum mitts are effective. Tying the sleeves of the sleeping clothes, putting mailing tubes over the arm or inserting spring steel in the inner part of the sleeve of the night clothes are suggested to prevent the elbow being bent or the hand reaching the mouth. The device that works with one child may not work with another. During the day children should be well supplied with toys and outdoor games to keep the hands so busy there is no time for thumb sucking. If the habit persists with the child who is three or older and he can be reasoned with, an attempt must be made to get his cooperation and concentrated effort. Keeping him sharply aware of the habit is important; it must be brought out of the realm of the unconscious. A device which works but is unusual is to force the child to suck his thumb ten minutes (by the clock) before a full length mirror three or four times a day or oftener until he is thoroughly disgusted with it. When other devices have failed the dentist can insert an appliance to keep the thumb or finger from touching the palate by soldering a 0.045 inch stainless steel wire to two Willett overlays placed on the upper first deciduous molars, the wire being adapted to clear the vault at the midline by 3/16 inch. The reflex of raising the hand to mouth will be gone in a few weeks and the appliance may be removed. If the habit returns, the appliance may be recemented to place for a short time.

LIP-BITING

Lip-biting and protrusive tongue habits contribute toward "open-bite". The child must be made conscious of the habit and his cooperation secured. Placing sharp spurs on the lingual arch wire held by Willett overlays on the first or first and second deciduous molars, helps. But the parents must be persistent in encouraging the child to overcome the habit.

MOUTH BREATHING

Mouth breathing is an important cause of protruding maxillary incisor

teeth, narrow maxillary arch and lack of development in the nasal region. In normal breathing the tongue remains in contact with the palate and forms to some extent a slight vacuum. This produces a desired downward pull on the palate and, as the attachments of the tongue partially form the floor of the mouth the mandible is supported in its normal position. The mouth is therefore kept closed without any voluntary effort. Thus, admonishing the mouth breather to keep his mouth closed is ineffectual because the tongue cannot make proper contact with the high narrow palatal arch. Adenoids or other nasal obstruction must be removed surgically and then the patient given breathing exercises. A chin support to assist normal breathing by partially supporting the mandible must be used. To help keep air from entering through the mouth a celluloid or metal disc held between the lips not only necessitates their being closed, but also makes the child conscious of their opening if the object drops. An anti-mouth-breathing device to be worn at night can be cheaply and quickly made of self-vulcanizing latex rubber. This can be poured into a plaster mould of the vestibule of the patient's mouth, and let stand twelve hours. The material can be washed daily for thorough cleansing.

SUPERVISING GROWTH

In supervising the growth of the child through mixed dentition the dentist must bring to bear all his knowledge of occlusion and of growth. He must be ready to explain to parents the "ugly duckling" stage of the dentition. Since most parents are alarmed when the permanent mandibular incisors come in crooked and rush to the dentist that "something be done so that my child may not have crooked teeth" the dentist must be wise enough to never, under any circumstances extract laterals as well as centrals to make room for the permanent incisors. He must explain to the parent that the pressure of the tongue will soon push the incisors into their proper place when the

deciduous centrals are removed and if the space appears too narrow nature will provide room by lateral growth of the jaws under stimulus of the erupting teeth. MacGregor²¹ states that the deciduous incisors should be allowed to exfoliate normally except in unusual cases.

MANDIBULAR INCISORS

Crowded mandibular incisors are exceedingly common. The findings of Cohen can help the dentist to follow up the case intelligently. He writes, following an experimental project in Minnesota:

(1) the greatest lateral growth in the dental arch occurs in the cuspid area; (2) in the cuspid area the greatest growth occurs during the eruption of the permanent incisor teeth; (3) the distance between the lower cuspids reaches its maximum at eight and a half years and from there on there is little growth. "Acceleration of growth between the upper cuspids is greatest from five to eight years, a slow, steady growth continuing until the age of about twelve years." Often in this "ugly duckling" stage the maxillary centrals erupt with considerable space between them. The parents should be shown Broadbent's chart of the development of the face so that they can follow an explanation as to why deciduous laterals should not be extracted to "make room" and how they may expect the space to close when the permanent cuspids erupt. Most orthodontists agree that excision of the frenum is not indicated in these cases as it is rarely a cause of the separation of the central incisors. Careful observation including the use of study casts is indicated again. McBride states that, if the molar occlusion is normal then there is a reasonable expectancy that the mal-erupting, or misplaced anterior tooth will be subject to self correction up to the eleventh and twelfth year. On the other hand if the molar relationship is abnormal the possibility of self-correction of any anterior abnormality is materially reduced and orthodontic opinion should be sought at once.

MAXILLARY CENTRALS IN LINGUAL OCCLUSION

When it is observed that one or both maxillary permanent central incisors may erupt lingual to the mandibular incisors, treatment should be instituted as early as possible. The simplest treatment consists in instructing the child and parent how to hold a wooden tongue depressor blade on the lower teeth in such a way that when closing down on it with the uppers pressure is brought to bear by the stick on the lingual side of the uppers. This is accomplished by forcing the end of the blade held in the hand toward the chin as the upper teeth contact it. I have seen this effective for rotating laterals in lingual version also. Half hour exercises at each end of the day produce results in a few weeks. McBride states that if the tooth has fully erupted the use of the tongue blade as described is insufficient and tells how to make a crown-plane to be worn on the lower teeth to accomplish the same results. MacGregor finds that the tongue blade can be used in such cases if the added force of a towel tied under the chin and over the head is used as soon as the wooden blade has brought the tooth forward enough for the child to get the lowers in behind the uppers.

DELAYED RETENTION OF DECIDUOUS TEETH

A maxillary deciduous first molar must be lost from the arch at approximately the time that the corresponding mandibular first molar is lost or malocclusion will result. It is a mistake to believe that all deciduous molars should be kept in the arches as long as possible. For this reason removal of upper deciduous molars as soon as the corresponding lower teeth have fully erupted is indicated.

In the extraction of deciduous teeth attention should be given to both sides of the arch at the same time. Too long retention of the deciduous teeth entails the possibility of impaction. X-rays should be used to determine the necessity of removing the deciduous teeth.

If the six year molar is delayed in eruption because of impaction on the distal of the second year molar, a separating wire between the teeth will bring the molar into occlusion in a short time. MacGregor²¹ gives five factors to be considered before treatment is begun and makes corresponding suggestions for treatment. It is a splendid achievement to get these teeth into their proper place in the arch. It is very important to keep them there. The incidence of caries is higher in these teeth than in any others in the mouth. Salzmann²² in an extensive study of early loss of these teeth found that a general disturbance of occlusion of the teeth resulted. Periodical examination and treatment as soon as necessary is important in preventing malocclusion from loss of permanent first molars.

ARCH EXPANSION

With the understanding of the three general types of malocclusion and the realization that increased width of one or both arches would lessen the deformity one comes to the problem of arch expansion. Willett states that in the majority of cases of neutroclusion had record casts been made of the deciduous teeth a year apart most of the cases could be traced back to a deficiency in the deciduous dentition that could have been corrected early with much advantage to the permanent teeth. Extended observation gives an opportunity to locate cause of lack of arch width. Rushing to place an appliance without observation of the child's growth may do more harm than good. Early treatment does not mean only the application of some mechanical appliance. Myofunctional therapy at the right time may do more than a mechanical appliance. However one should not be frightened away from the use of appliances at all. A mechanical appliance may do easily at an early stage what it can do only with difficulty later. If an arch expander like that suggested by Arnold⁹ is used the possibility of doing harm is minimized.

FORCES GUIDING TEETH TO POSITION

The inclined planes of the surfaces of the teeth guide newly erupted teeth to position and if the dentist sees the teeth being guided wrongly he can intervene immediately to correct conditions. Merzhon,²³ an orthodontist of thirty-four years experience, cites the cases where he institutes correction early as those where the inclined planes of the newly erupted teeth have caused malocclusion. He says: "When the buccal cusps of the maxillary six year molar bite in the central groove on one or both sides I work early. In a few months I remove the corrective appliances and do nothing further. We usually find in cases in which growth has gone wrong as early as with occlusion of six year molar abnormalities will be present in the teeth which erupt later." He also works early when the maxillary incisors bite inside the mandibular teeth and the maxillaries protrude so much that the lower lip habitually is held between the lingual surface of the uppers and the labial surface of the lowers.

Another force guiding teeth to position in the arch is the muscles of the face. The teeth erupt and their investing tissues develop between the tongue on the inside and the lips and cheeks on the outside. Unless these muscle forces are properly balanced there will be abnormal development of the dental arches. Baker quotes Clarence T. Simon, director of the speech clinic of Northwestern University, as saying recently, "In one minute of conversation at average speed, the tongue is involved in eleven hundred to twelve hundred movements." Baker points out that practically every movement of the tongue exerts pressure on the lingual surfaces of the mandibular teeth as well as upon the hard palate. This tongue pressure stimulates development of the mandibular dental arch and this in turn influences the development of the maxillary arch. Anderson²⁴ cites the case of a patient who lost his upper lip from a chemical burn. Some years later, due

to the effect of the tongue and the lower lip, the maxillary incisor teeth were in a position three-fourths horizontal. He concludes that the upper lip is a most important factor in maintaining satisfactory inclination of the maxillary incisors. Muscles have been described as "living orthodontic bands" and if the dentist acquaints himself carefully with their use he can properly describe exercises to his growing patients and their parents which will be beneficial in intercepting malocclusion

MUSCLE EXERCISES

Rogers,²⁵ who was one of the first to recommend myofunctional therapy describes exercises to develop the muscles. He suggests that the child of less than six as well as the older patient can be benefited by properly executed exercises. Vigorous mastication should be encouraged in children and deep breathing exercises are beneficial to promote development. Observation shows that short upper lips are not always short on account of limited soft tissues but are drawn up weak and flabby. Spencer says, "An efficient upper lip exercise consists in having the patient draw or force the upper lip over the incisal edge of the incisors." He advocates that muscle exercises should be practised before a mirror until the child becomes proficient in performing them. It is important that the child be properly instructed in the various exercises and attention given to the order in which they are performed. For details of particular exercises and their use the reader is referred to Rogers.²⁵

IMPORTANCE OF CORRECT DIAGNOSIS

Why growth deviates from normal is not properly understood. Orthodontists are searching diligently to solve this problem. They all agree that interfering with nature can do much harm. Oppenheim²⁶ stressed the necessity of right diagnosis before treatment and pleaded for the use of light forces. J. V. Merzhon with a background of nineteen years as a general practitioner and thirty-four years as an orthodontist says, "It is better to do nothing than

to do harm." Willett reminds dentists not to promise parents too much in the straightening of children's teeth. Clinch²⁷ says, "... growth should be allowed to do as much as it can, while we stand aside and watch progress". A case of Hellman's is quoted to illustrate:

"An appraisal of a boy's face at two years nine months, four, five, six, seven, eight, nine years three months, ten, eleven, twelve, was made on this basis. (Class II Division 1 malocclusion.) Now if a diagnosis of this boy's dentofacial condition had been made when he first came in to see me, the decision reached then would have been diametrically opposite to that reached later. Accordingly the face would have had to be lengthened and widened. What I actually did for seven years was just let the boy grow. When he reached the proper stage in development, I corrected the occlusion of his teeth. The face obviously took care of itself."

Orthodontists agree on the need of early intervention in many cases. They stress the importance of long observation and careful records. All agree that much malocclusion can be intercepted. Amazing successes and baffling failures come to all of them. With knowledge of what can be done and appreciation of his limitations the dentist meeting child patients is all the more anxious to intercept malocclusion.

SUMMARY

- (1) The general practitioner has an important duty in intercepting malocclusion.
- (2) He must have a full knowledge of occlusion in all stages of growth.
- (3) He must understand growth in all its phases especially dento-facial growth.
- (4) Thorough examination and complete records are important in following growth of child patients. Plaster models and x-rays are indispensable.
- (5) Standards are useful but must be applied with judgment to individual patients.

- (6) The aetiology of malocclusion is not well known but in many instances cause is obvious and so is treatment.
- (7) Statistics show the importance of maintaining deciduous teeth.
- (8) Causes of tooth decay are not well understood but parents are well advised to substitute proteins, milk, fruits and cereals for refined carbohydrates in the child's diet.
- (9) Restorations should be made with as much care in children's teeth as in adult's.
- (10) Space maintenance is important in intercepting malocclusion. Cases and means are thoroughly considered.
- (11) Suggestions for combatting thumb sucking, lip biting and mouth breathing are made.
- (12) The importance of understanding the mixed dentition and growth forces is stressed with attention given to proper shedding of the deciduous teeth.
- (13) Simple correctives of lingual version of upper incisors are suggested.
- (14) The need for arch expansion in certain cases is considered.
- (15) Importance of early treatment when interference of cusps is discovered.
- (16) The muscles as important factors in development of the dental arch and suggestions for using these "living orthodontic bands" considered.
- (17) Appreciation of limitations and of the importance of intercepting malocclusion.

BIBLIOGRAPHY

1. Friel, Sheldon: Occlusion. Observations on its Development from Infancy to Old Age, Proceedings of the First International Orthodontic Congress, page 138, 1927.
2. Broadbent, B. H.: Development of Occlusion: University of Pennsylvania Bicentennial Conference, University of Pennsylvania Press, Philadelphia, 1941, page 41.
3. Lewis, Samuel J. and Lehman, Ira A.: Observation on Growth Changes of the Teeth and Dental Arches, *Dental Cosmos* 71: 480-499, 1929.
4. Hellman, Milo: Diagnosis in Orthodontic Practice, *American Journal of Orthodontics and Oral Surgery* 27: 681-704, 1941.
5. Brodie, Alan G.: On the Growth Pattern of the Human Head, *American Journal of Anatomy* 68, page 258-9, 1941.

6. Spencer, Paul G.: Prevention of Malocclusion, C.V. Mosby Co., St. Louis, 1941.
7. Salzmann, J. A.: Diagnosis in Orthodontia, American Journal of Orthodontics and Oral Surgery 28: 414-425, 1942.
8. Baker, Charles R.: Development of Occlusion of the Teeth, Journal of the American Dental Association 31: 1470-1480, 1944.
9. McBride, Walter C.: Juvenile Dentistry, 4th Ed. Lea and Febiger, Philadelphia, 1945.
10. Higley, L. B.; Brauer, J. C., Boyd, J. D.: Dentistry for Children, P. Blakiston and Co. Inc., Philadelphia, 1939.
11. Schacter, H.: Incidence and Effect of Premature Extraction of Deciduous Teeth, British Dental Journal 75: 57-60, 1943.
12. Marshall, T. R.: A Survey of Dental Service Need, Canadian Dental Association Journal 11: 201-210, 1945.
13. Bagnall, J. Stanley: Research on Dental Caries and Its Application to Practice, Journal of Canadian Dental Association 12: 485-494, Nov. 1946.
14. Hill, Thomas J.: A Textbook of Oral Pathology 3rd Ed. Lea and Febiger, Philadelphia, 1945, Chapter IX.
15. Becks, H., Jensen, A. L., Millarr, C. B.: Rampant Dental Caries: Prevention and Prognosis, Journal of American Dental Association 31: 1189-1200, 1944.
16. MacGregor, Stewart A.: Interception of Malocclusion, Canadian Dental Association Journal 11: 301-312, 1945.
17. Cohen, J. T.: Selection of Cases for Space Maintainer, Northwest Dentistry, April, 1941.
18. Brauer, John C.: Report of 113 Early or Premature Extractions of Primary Molars and Incidence of Closure of Space, Journal of Dentistry for Children 8: 222-224, 1941.
19. Willett, R.C.: What Types of Malocclusion are Preventable, Journal of American Dental Association 31: 1066-1080, 1944.
20. Swineheart, E.W.: Structural and Nervous Effects of Thumb-Sucking, Journal of the American Dental Association, 25: 736-747, 1938.
21. MacGregor, Stewart A.: Ectopic Eruption, Canadian Dental Association Journal 11: 211-215, 1945.
22. Salzmann, J. A.: Facial Changes Attending Loss of First Molars, Journal of American Dental Association 25: 892-905, 1938.
23. Mershon, J.V.: Orthodontic Facts Versus Fallacies, American Journal of Orthodontics and Oral Surgery 28: 475, 1942.
24. Anderson, G. M.: Practical Orthodontics, Sixth Ed. C. V. Mosby Co., St. Louis, 1942, page 91.
25. Rogers, A. P.: Myofunctional Treatment of Malocclusion, Practical Orthodontics Sixth Ed. C. V. Mosby Co., St. Louis 1942, Chapter XIII.
26. Oppenheim, Albin: Tissue Response to Orthodontic Intervention, American Journal of Orthodontics and Oral Surgery 28: 298, 1942.
27. Clinch, Lilah: The Stage for Intervention in Certain Malocclusions, British Dental Journal 70: 121-130, 1941.

Every dentist at some time has reflected upon the paradoxes in dental practice. He has seen dentists with highly developed technical talents and a vast fund of information who were without a practice. He has seen other dentists with only enough skill to pass a state board examination who prospered long in practice.

We have lumped the factors for success or failure under the catch-all heading "personality".

What is this intangible quality, personality? It has little to do with physical appearance, wealth, education, or skill. Kings often lack it; vassals may have it to a high degree. It has been called "magnetic" if favourably developed, and "forbidding" if lacking. It has something to do with the gift of human warmth and understanding. It is closely associated with the ability to put one's self in the position of the other fellow. The Golden Rule, so easy to quote and so hard to practice, is a description of the operation of the human personality at its best.

A good dentist is developed by encouraging a mind that has scientific interests and by training hands that have mechanical aptitudes. But that is not all! A good dentist must be an understanding human being who recognizes the pains of others and strives to control them as if they were his own.—From Editorial in Oral Hygiene, Dec., 1947.

AN AMUSING STORY

"An amusing incident happened to me some years ago," writes Dr. Viljoen, President of the Cape Western Branch of the Dental Association of South Africa. "A patient had owed me some money for a very long time and all my repeated attempts to recover payment had failed. Finally I persuaded him to call and see me."

"Well, doctor," he said, "I can't pay you because my clients don't pay me. If you were to give me a job now and again I might work off your account."

"What kind of work do you do?" I asked.

"I am a carpenter," he replied, "I make tables and chairs, and," he added after scanning my height, "I also have a coffin that is quite ready"—D. Mag. and Oral Topics.

ANNOUNCEMENTS

Canadian Dental Association Convention, June 20-24

at the

MANOIR RICHELIEU, MURRAY BAY, QUEBEC

All Canadian dentists will rally at this beautiful resort hotel in June for study, fellowship and a good time.

Make your reservations now by applying to Dr. Gustave Ratté, 140 St. John St., Quebec City.

Dominion Dental Council Examinations

The Dominion Dental Council examinations will be held on May 19, 20, 21 and 22, in Edmonton and Halifax. The Clinical examinations will be held at the convenience of the Clinical examiners. Each candidate should get in touch with the Clinical examiner to find out what his requirements will be.

Class A candidates fees will be accepted any time up to April 20. Class D fees should be in this office not later than April 1. Any who fail to qualify may have their fee returned.

A. J. BRETT, Secretary.

B. C. Dental Association

This Association will hold its annual meeting in Victoria on Friday and Saturday, April 16-17. This is being held earlier than usual so as not to interfere with the meeting of the Pacific Coast Dental Conference.

H. R. TURNER, Secretary,
1043 Douglas St., Victoria, B.C.

Seventh Pacific Coast Dental Conference

This Conference, comprising in its membership the provinces of Alberta and British Columbia in Canada and the States of Arizona, California, Idaho, Oregon, Montana, Nevada, Utah and Washington in the United States will meet in Salt Lake City, Utah, July 12 to 16, 1948. Western hospitality that knows no limit will prevail.

The western provinces of Canada are closely linked with this Conference as Dr. H. M. Cline of Vancouver, B.C., and Dr. R. A. Rooney of Edmonton, Alberta, are members of the Executive Council and Dr. Leslie G. Robinson of New Westminster, B.C., and Dr. Rooney are members of the Publicity Committee.

Public Health Dentists

It is proposed to hold a meeting of Canadian Dentists who are actively interested in the field of dental public health during the 1948 Convention of the Canadian Dental Association at Murray Bay, June 20-24.

The object of such meeting will be to discuss the possibility of organizing an Association of Canadian Public Health Dentists.

Anyone desiring information respecting this meeting should write:

DR. HUGH R. McLAREN,
c/o Canadian Dental Association,
211 Huron Street, Toronto, Ont.

The Forum

DENTAL INVESTIGATIONS OF GREENLAND ESKIMOS

by P. O. PEDERSON, Associate Professor of Dentistry, Copenhagen.

Condensed from Proc. of the Royal Soc. of Medicine, Oct., 1947.

Greenland is the largest island in the world. The greater part of the country is covered with ice. The ice cap completely separates East Greenland from West Greenland. Greenland has only 17,000 inhabitants, of whom approximately 1,000 live on the eastern coast.

During the greater part of the year *East Greenland* is isolated from the outside world by an impenetrable ice girdle. All the natives of East Greenland live in the areas around the trading stations of Angmagssalik and Scoresbysund. The Eskimos at Angmagssalik were unknown till 1884 when the tribe was discovered by an officer of the Royal Danish Navy. In 1894 the Danish Government established a trading station at Angmagssalik to prevent the natives from perishing. The Scoresbysund area became inhabited in 1924 by Eskimos emigrating from Angmagssalik. The Eskimos of East Greenland are practically without white admixture. In remote parts of the Angmagssalik area they still largely subsist on Eskimo protein-fat diet and—at most—taste white man's food. The Eskimos who have settled down at the two trading stations, however, have to no small extent adopted the dietary habits of white men.

Contrary to East Greenland *West Greenland* had early white contact and Danish colonization was firmly established more than two hundred years ago. The western coast is more easily accessible than is the eastern coast and white influence is more predominant. The natives, among whom are a large

number of mixed blood, have settled down under urbanized conditions and largely depend on imported food. This is especially true of the main trading stations. The degree of urbanization in the native villages entirely depends on the distance to and accessibility of the trading post.

There is a very considerable increase in the consumption of cereals (including bolted wheat flour and biscuits). The consumption of sugar has reached — and at some trading stations even surpassed — the top levels of countries like the United States and Denmark.

Greenland is a closed country. Nobody can go there without the permission of the Danish Government. All trade with the natives is a State monopoly. The turnover of all goods is on record and well known. Useful information is obtainable from the Colonial Administration on the sale of food by each trading post as well as on many other aspects of native life.

Under the joint sponsorship of the Danish Government, the Dental School in Copenhagen, and the P. Carl Petersen Foundation the author, with a varying number of co-workers, made three expeditions to Greenland in order to study dental conditions and allied subjects.

During 1935 motor-boat journeys covering more than 1,500 miles took the author all over the Julianehaab district, South-west Greenland, in which about 25% of the West-Greenlanders are living. A total of 1,634 natives representing all degrees of urbanization were examined.

During 1936 the author examined teeth and jaws of 525 Eskimo skulls from Greenland in the Copenhagen University Institute for Medical Anatomy.

During 1937 East Greenland had its first experience of dental surgeons. 915 Eskimos (i.e. 96% of the population) were examined. During 1939 the third Danish dental expedition to Greenland visited the Julianehaab district, South-west Greenland, to re-examine the natives there.

The following are some of the principal results of the aforementioned dental investigations.

The crowns of the molar teeth are superior in size to those of whites whereas the crowns of premolars, canines, and incisors are not.

Shovel-shaped incisors are almost universally met with.

Average root height is reduced during lifetime to a striking degree. In many cases root absorption of vital incisors occurs even during adolescence. More or less pronounced absorption of the apical part of the roots with hyperostosis of the remaining part of the roots seems to be an almost normal occurrence in the primitive Eskimo. Cases have been observed indicating that function can become so strenuous that the periodontal tissues respond with root absorption on a large scale.

Supernumerary roots are frequent.

The pulp cavity is large during childhood and young adult age. Later on secondary calcifications including enormous pulp stones are widespread. Large pulp stones suggestive of vitamin-C deficiency are also found in young teeth. Rickets is unknown in the primitive Eskimo. The degree of mineralization as indicated by the surface texture is generally perfect both in the skulls and in present-day East Greenlanders.

Mastication is strenuous and the teeth are used as a tool for many kinds of work. The women use their teeth for preparation of seal hides. The hides are thoroughly chewed. This applies for instance to the hides to be used for boot-soles. Sinews are pulled across the teeth and rolled against the cheek

to make them apt for sewing. Prepared in this way the sinew will wear a groove in the "masticatory surfaces" of the incisor teeth. This groove has a transverse course and remains somewhat ahead of the general attrition.

The general attrition of the teeth is severe during maturity and in the old Eskimo — male as well as female — the teeth are often worn down to the gums. In females the chewing of hides accounts for part of the wear. On the whole, however, the bearing of this kind of work upon the attrition of Eskimo teeth has been over-emphasized since the male Eskimo, who does not chew hides, also shows exceedingly pronounced wear on his teeth.

Exposure of the pulp due to attrition is comparatively rare. In most cases abundant formation of secondary dentine protects the pulp cavity from being opened.

Multiple small fractures of the teeth are seen in almost all adult Eskimos living in primitive areas. Extensive fractures exposing the pulp are rather frequent.

We do not know of any case of caries in Eskimo skulls dating with certainty before contact with white people. Among 525 Greenland Eskimo skulls with 5,606 permanent teeth and 146 deciduous teeth only two were found with caries. These two cases are, however, not properly dated and may be more recent than early white contact.

Caries incidence has risen from nil or practically nil in the pre-Danish time to a considerable level in modern East Greenland and to a simply alarming level in modern West Greenland. This increase has mainly taken place during the last fifty years in West Greenland. In East Greenland it is quite recent.

Both in West Greenland and in East Greenland one finds a great difference in the caries incidence in villages on the one hand and in trading stations on the other. The trading stations are everywhere more seriously affected.

It is a new disease in Greenland leaving the older natives less affected than the younger. However, caries may at-

tack even natives whose teeth have developed under Stone Age conditions. Adult natives leaving primitive localities and settling down in urbanized areas — especially when young — frequently become afflicted with rampant acute caries although their teeth are of perfect structure. This applies, for instance, to young Greenlanders who temporarily stay in Denmark.

In the author's opinion we are not entitled to draw far-reaching conclusions from these studies as to the point so much debated in this country, viz. whether tooth structure or the carbohydrate factor plays the greater role. Those who hold the latter view may find some support in our findings, but there are also hints to the opposite effect.

In the primitive Eskimo of East Greenland we have not observed any cases of generalized periodontal disease. Nor did we find any in West Greenland. Apparently this dental ailment will enter urbanized groups later than caries. This statement, however, is only true of marginal periodontal disease affecting the bone to such an extent readily detected by means of x-rays. Gingivitis was widespread also in East Greenland. Here the gum disease, however, did not affect the marginal periodontal bone to any appreciable extent. On an average the men were afflicted with gingivitis in greater numbers and also to a more severe degree than were the women. This is,

among other things, to be put down to the fact that the men are still more addicted to the use and abuse of tobacco and tobacco ash than the women. Another gingivitis-producing factor, no doubt, is the very frequent mouth-breathing. Ulcerative gingivitis was absent in Greenland during the late thirties.

Loose teeth are only met with in the primitive Eskimo under very special conditions.

Perfect development of the jaws and regular position of the teeth were predominant in ancient Eskimos and are still so in present-day East Greenlanders. Irregularities are, however, not at all rare with the latter. This not only holds good of young natives, but also for adults who have, during their childhood, practically never seen a white man, still less lived on white man's food. These irregularities (mainly crowding of upper and lower anteriors as well as irregularities in the premolar regions) have nothing to do with the crowding of the upper incisors observed by Weston A. Price in semi-civilized and civilized peoples in various parts of the world and so energetically maintained by him to be caused by civilization.

Failure of eruption of permanent teeth is not infrequent. Impactions of lower third molars are fairly common, but do not seem to be associated with lack of space for the accommodation of the wisdom teeth.

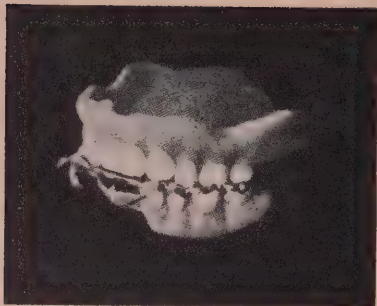
OCCUSION

by Dr. Molnar Laszlo.

Summary of paper in Hungarian Review of Stomatology, October, 1947.

The best occlusion is the functionally optimal occlusion, with complete elimination of occlusal disharmony. Nature secures balanced occlusion by gradual attrition of the occlusal surfaces. Different degrees of hardness and the difference between enamel and dentine of the same tooth play a considerable part in the development of occlusal harmony. Cuspal coordination is simplified through the use of dental casting alloys

(20 kar. gold) on the occlusal surfaces in mandibular prostheses. The upper denture should have porcelain teeth (*Fig. 1*) This will allow all cusp and interfering surfaces to become worn down and the attrition of the occlusal surfaces permits a proper distribution of the masticatory stress. The masticatory surfaces of the opposing hard porcelain teeth travel the individual path in the softer metallic onlays. In



this way we get the most accurate and comfortable occlusion in full denture restorations, which is peculiar to the individual. Hall-teeth and Cavidens-porcelain bands may be used in lower dentures. In the finished dentures the cavities of the lower porcelain molars and bicusps are filled with inlay wax and carved to anatomic forms. Have the patient close in centric occlusion and then chew in the lateral and protrusive occlusal path on the wax onlays, so that freedom of movement may be had in all directions. Carve the occlusion and cast the onlays in 20

karat gold, palladium gold or silver. The finished onlays are cemented in place.

The procedure is practical, the benefits to the edentulous patient are numerous. The attrition of the metal surfaces permits a proper distribution of the stresses, giving consideration to the individual mandibular movements. This technique for occlusal coordination obviates spot grinding (which is a hazardous procedure) and results in comfort and elimination of sore spots even by overextension of the base.



© Medical Economics

UPS AND DOWNS IN ORAL SURGERY

by H. G. WORMAN, D.D.S., Minneapolis, Minnesota.

Condensed from Minneapolis Dist. D. Jour., Dec., 1947.

First, I wish to emphasize the importance of brief but proper records. Without more than a minimum of effort one can readily ascertain the "present complaint", or what caused the patient to seek attention. Next would follow pertinent items of "history." Then one would record "findings" or results of examinations. "X-rays" would be taken and findings recorded. Then a "working" or complete "diagnosis" would follow, after which brief notes as to treatment advised should be made including medications, home care, and surgical procedures.

On the surgical set up for operation, be it the extraction of a tooth or what not, suffice it to say that the ideal is a systematic sterile set up, and that anything less than thorough cleanliness is not to be tolerated. Not the least consideration also is the fact that thorough cleanliness is a wonderful practice builder.

Regarding the instrumentarium I wish to lay stress on two items which are the greatest boon to the dentist among all the gadgets. One is the good old head light, and the other is a good suction unit with an assistant that can use it.

The solution to many of the local anaesthesia problems is the judicious use of the less common injections such as the infraorbital injection with the extraoral approach, the posterior palatine block for anaesthetizing the upper teeth from the 2nd or 1st bicuspid teeth forward, or the use of bilateral mandibular nerve blocks for cases where the removal of the anterior mandibular teeth is to be done.

I believe one clear cut cause of post-operative pain and trismus is the use of anaesthetic solutions which are cold. This time of year, especially in the morning, one is apt to use solutions which are not warmed up to body temperature.

Too much stress cannot be placed on the matter of whether conditions are right for surgery. Our attention has been focused of late on the matter of rheumatic fever and the absolute necessity of employing chemotherapy before throwing a bacterial shower into the blood stream through surgical intervention in such cases.

I do not believe it wise to use general anaesthesia in all cases any more than to attempt to use local anaesthesia in all cases. There is a place for each. General anaesthesia is indicated in the case of most children's work and where certain sore teeth are to be removed without waiting for resolution of the inflammatory process.

It is known now that prolonged administration of nitrous oxide may create permanent damage to the personality and central nervous system, because of possible anoxia. For this reason it may often be better to hospitalize a patient and use some other general anaesthetic such as pentathol sodium, nitrous oxide, and curari with an intra-tracheal tube being employed.

It is advisable to make tissue flaps freely to enable one to see and to avoid trauma. Wherever flaps are made there must be caution in regard to the maintenance of a good blood supply. Also trauma must be avoided at all times.

In the removal of teeth it seems that one item of good practice is the trimming of alveolar bone in consideration of post-operative comfort, and future restorations. Perhaps the most pertinent thing about such trimming is to trim, but not too much. In the long run, experience will teach one how much to trim but in the meantime it is well to trim too little rather than too much.

Premedication is a desirable thing and we must admit that an operation

is sometimes rather unsatisfactory because of its omission.

Reasonable and conservative advice for the control of pain might vary from the prescription of aspirin or anacin to that of codeine or morphine. *Physical rest* is important and may be accomplished by voluntary action on the part of the patient facilitated by sedatives and hypnotics. The building up and maintenance of the highest possible state of resistance is very desirable and is accomplished by proper diet and elimination, and subdued or restrained physical activity. The wound itself usually will fare best, other things being equal, if not too much attention is paid to it by way of medicaments, irrigations, etc. after the operation. One should do whatever is possible by way of retaining blood clots. This usually includes cautioning the patient regarding spitting and rinsing following closure of the wound. If blood clots become lost, painful bare bone must be covered and protected with analgesics and antiseptics until the soft tissues cover

such exposed surfaces in the healing process. This may require a period of time varying from a few days to two weeks or more.

The routine overuse of medicaments in wounds immediately following operations, is to be discouraged, but frequently where there has been severe trauma, it is desirable to use some form of antiseptic and analgesic. Of these there are many, not the least among which is sulpha powder or the calcium salt of penicillin.

There has long persisted much controversy regarding the use of heat and cold in the treatment of inflammation and trauma. I believe it may be said that heat should be used as a treatment for inflammation and that cold should be used as a treatment for trauma. There are such possible exceptions as the use of cold instead of heat where inflammation and swelling has reached a point where breathing is embarrassed. I think it is true that in court the use of heat as a treatment would be accepted by a jury.

RELATIVE MERITS OF VACUUM INVESTING OF SMALL CASTINGS AS COMPARED TO CONVENTIONAL METHODS

by RALPH W. PHILLIPS, B.S.,

Department of Dental Materials, Indiana University, School of Dentistry, Indianapolis, Indiana.

Conclusions of Paper in Jour. of D. Research, Oct. 1947.

1. On the basis of some 800 experimental castings, it can be said that smooth small castings, free from bubbles and nodules, can routinely be produced either by use of vacuum equipment or by a careful hand technique. However, for an inexperienced or inept operator such results are easier to obtain with vacuum apparatus, since the human element is reduced. The time necessary to carry out the investment procedure is the same for both methods.

2. Vacuum investing produces a denser mass of investment, as measured by an air flow meter, which results in slightly greater crushing strength of investment.

3. The increased density of the investment in turn produces a denser gold surface. This is entirely a surface condition and the practical significance is not known.

4. The water-investment ratio and setting time are not altered appreciably by the use of vacuum. The temperature change in the wax pattern is only -2°F under normal operating conditions.

5. The only evidence of distortion caused by vacuum occurred on the steel MOD die, in approximately 1 out of every 3 made. This can be eliminated on this particular die by spruing on the occlusal surface rather than on the proximal wall.

THE USE OF THE BITE PLANE IN TREATING LINGUAL OCCLUSION OF UPPER ANTERIOR TEETH

by WILLIAM E. ST. JOHN, D.D.S.*

From Northwestern University Bulletin, Nov., 1947.

A condition in which one or more of the maxillary anterior teeth occlude lingual to the lower anteriors, while the mandible and its dental arch are in normal mesio-distal relationship to the maxilla, is seen not infrequently in young patients. One must not confuse these cases with the typical Class III malocclusion in which the mandibular arch and the body of the mandible are in mesial relationship to the maxilla.

Probably the most common cause of this lingual occlusion of the upper anteriors is to be found in prolonged retention of their deciduous predecessors. Failure of the deciduous root to resorb and the tooth to be lost will deflect the succedaneous tooth from its normal path of eruption, causing it to come into the arch in a lingual position. If the occlusion is such that these permanent teeth are "locked" in a lingual position, treatment must ensue to give them their normal labial relationship to the lowers.

In addition to being aesthetically displeasing to the patient, this condition frequently leads to periodontal involvement. The lingual occlusion of the upper tooth places an abnormal force in a labial direction on the lower opposing anterior teeth which may cause resorption of the labial plate of bone and resultant gingival recession.

The problem in correction of this condition is that of tipping the offending upper tooth, or teeth, into labial occlusion. In most cases, treatment will be successful if the following circumstances prevail: (1) There must be sufficient room mesio-distally in the arch for the malposed tooth or teeth. (2) The apex of the root of the lingually occluding upper incisor should be in relatively the same position in the basal bone as it would be were the tooth in normal occlusion. On the other hand, if the apical portion of the root is

lingual, an orthodontic appliance supplying bodily movement is used to bring the tooth into proper labial occlusion. Lingual position of the apex is recognized by a labial axial inclination to a tooth which is nevertheless in lingual occlusion. (3) The patient should present a Class I malocclusion.

These conditions prevailing, treatment is simple and the prognosis good.

An easy yet effective means of dealing with this condition is through the use of the acrylic bite plane. The inclined plane was one of the very early instruments employed for moving teeth. Fox and Harris ascribe the first description of the plane to Catalan in 1814¹. It has been in general use since, undergoing modifications and improvements from time to time to fit the needs.

A swaged gold bite plane—made in two sections, a labial and lingual, wired together and cemented to the lower arch—was described by Jackson for use in moving lingually occluding upper anterior teeth².

Farrar³ used gold, silver, and hard rubber for the construction of inclined planes.

To make the acrylic plane, full upper and lower impressions are taken with some reliable elastic material, and study models are poured. An additional model in hard stone of the lower arch is needed upon which to construct the appliance. This can be poured from an additional impression, or the original lower impression may be used, depending upon the type of material employed.

Study models showing a left upper central incisor occluding lingual to the lower arch are seen in Figure 1. The patient, a girl 12 years of age, presented herself to the Northwestern University Dental School Children's Clinic.

An examination of the study models will disclose the proper position and

*Graduate Student in the Department of Pedodontia.

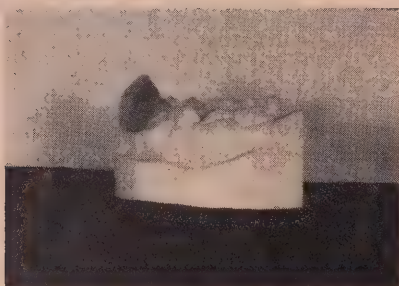
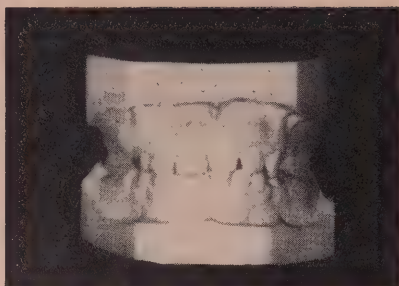


FIGURE 1.

Models showing lingual occlusion of maxillary left central incisor.

FIGURE 2.

Lateral view of bite plane in position.

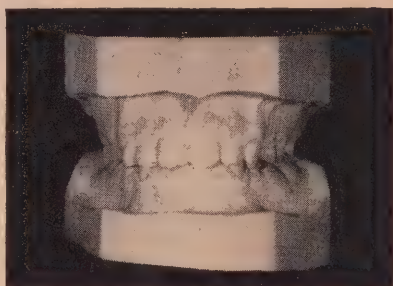


FIGURE 3.

Bite plane in occlusion.

FIGURE 4.

Case in Figure 1 after treatment.

form of the bite plane. It is to cover the six lower anterior teeth and offer occlusion only to the malposed tooth or teeth in the upper anterior segment. This will relieve all teeth in both arches of occlusion except those to be tipped. The angle of the bite plane is so formed as to place a tipping force in a labial direction upon the tooth to be moved.

Figure 2 is a wax model of a bite plane in position as viewed from the side. Figure 3 shows the bite plane on the model as it will function in the mouth. Note that the only tooth in the upper arch that occludes is the malposed left central incisor.

In the actual construction of the appliance, the stone model is tinfoiled in the anterior segment, and the bite plane formed in pink base plate wax. In extending the wax, carry it to include the distal of each lower cuspid and one

to two millimeters below the lowest point on the crest of the gingivae on both the labial and lingual. These extensions are sufficient to give the appliance stability and retention, with the aid of cement, throughout the period of treatment.

In forming the plane, guard against interference with the palate just lingual to the upper incisors and with the upper cuspids. However, if the plane is not carried back far enough, the patient will be able to protrude the mandible and continue to place the uppers into a lingual occlusion. Mounting the case on an articulator will aid in determining the form of the plane. However, this is not essential.

The case is invested in a regular denture flask and processed in clear acrylic.

Before cementing the bite plane to

place with regular zinc oxyphosphate cement, fit it on the lower teeth and check the occlusion against possible interferences.

The appliance will be uncomfortable to the patient and will interfere with his speech and mastication of food for the first day or two. It will also cause a slight gingival irritation where the acrylic covers the soft tissue. However, the appliance is seldom in the mouth more than a week or two before the tooth is moved into proper position, and the inconveniences suffered are not of a serious nature. At the time of removal of the bite plane the necessary

physiologic bone changes that take place in all tooth movement are yet to be completed but will proceed with the aid of the occlusion which retains the tooth in its proper labial position.

Figure 4 shows models of the same patient as in Figure 1 after treatment.

BIBLIOGRAPHY

*Graduate student in the Department of Pedodontia.

1. Fox and Harris. "Natural History and Diseases of the Human Teeth". Philadelphia, Barrington and Haswell. 1846. p. 100.
2. Jackson, V. H., "Orthodontia and Orthopaedia of the Face". Philadelphia, J. P. Lippincott Co., 1904. pp. 193-198.
3. Farrar, J. N. "Irregularities of the Teeth". New York. The International News Co. 1888. pp. 782-798.

ANAESTHESIOLOGY AND THE PUBLIC

Editorial by HOWARD DITTRICK, M.D.

From *Current Researches in Anaesthesia & Analgesics* July-Aug., 1947.

Is the public aware of the significance of this recent specialty that has been added to the realm of medicine? Have we been so busy establishing our work in the estimation of fellow practitioners that we have neglected to inform the citizens of the community to whom we must look for support? There is naturally a time-lag in lay understanding, but progress demands that an enlightened public should appreciate, in its entirety, the new specialty—anaesthesiology.

Up to about 1900, anaesthetic agents were few, chloroform, ether and nitrous oxide being those most commonly employed. After a few months' experience any doctor could set himself up as an anaesthetist and between times engage in general practice. There was so little attraction to this field that in some localities anaesthetic service lapsed into the hands of nurses. Laws were changed to make this practice of nurses legal. Schools were established for their training and hospital administrators adopted nurse anaesthesia as an economic measure. It is not surprising that the status of the physician anaesthetist was given little consideration.

With the improvement of medical

education and emphasis upon the teaching of the basic sciences, medical research brought many discoveries. With the advent of ethylene, procaine, cyclopropane, divinyl ether, and many barbiturates, together with the wide variety of new methods of administration, the anaesthetist had to develop a familiarity with many sciences to keep abreast of constant advances. The public became interested in medical research which so frequently presented effects which were truly dramatic. An anaesthetist now had to be familiar with chemistry, physics, anatomy, pharmacology, biochemistry, and most of the other fields of medicine in order to furnish the service required in a more complex practice of surgery.

No longer could the physician decide that he was a specialist in anaesthesia. Special training was necessary for proper understanding of the facilities that became available. Gradually the training was extended to a residency of two years followed by three years of limited practice, after which the candidate had the examination of the National Board before he was certified as an anaesthesiologist.

All this time physicians have been

arguing and persuading one another that anaesthesiology was here to stay and warranted recognition as a specialty. Earlier, upon occasions when evidences of this new specialty were called to the attention of the public, it was found that there was surprise, but also lack of community understanding of the advance that had been made, the training that had become necessary, and the extended period of preparation. Public education had not kept pace.

But recently public interest has

been awakened and from time to time popular articles are appearing in lay magazines. The community is learning more about anaesthesiology and the training of those who administer anaesthetic agents. When authentic information has become more general there will not only be a sympathetic attitude, but there will also be public demand that anaesthesia shall be entrusted only to physicians who have undergone the extended period of training to qualify them as anaesthesiologists.

BURNING SENSATION OF TONGUE

TO THE EDITOR: (J.A.M.A.)—*I have in the past two years seen two patients, a woman of 60 and a man of 53, whose chief complaint is a burning sensation of the tip of the tongue. There is nothing visible on inspection. Both patients are perfectly normal in other respects. Vitamin deficiency has been ruled out and yet vitamin therapy did not lead to any improvement in their symptoms. Gallbladder disease has also been ruled out.*

—M. D., New York.

ANSWER.—A burning sensation may occur in the absence of obvious cause. Inflammation and irritation are often causative. Rough or unclean teeth and dentures may produce irritation at the tip of the tongue. A low grade infection can occur without redness but with soreness and burning of mouth surfaces. Smoking, food or drink may irritate the tongue. Electrogalvanic currents from metal filling are now considered as credible a cause as when first described.

The tongue mirrors the condition of the intestinal tract to some extent, but the atrophy (with hypoacidity) and catarrh and hypertrophy (with hyperacidity) are usually visible and are not regularly accompanied with burning.

Deficiencies may produce tongue

changes, but they are usually visible. Subclinical lesions may come from the lack of several members of the vitamin B complex and are not always cleared by therapy. The absence of the intrinsic factor, as well as an iron deficiency, may produce a superficial glossitis.

A neurogenic cause is possible, especially in the age group mentioned. The location makes a nerve lesion improbable. Burning is the common symptom of the temporomandibular syndrome, a result of occlusion changes from tooth wear and gingival shrinkage. Headache and other symptoms of the syndrome should be present. A psychoneurotic condition is perhaps associated with the climacteric.

Other methods of therapy might include cleaning and smoothing of the teeth or denture, a decrease in smoking and the use of irritant food and drink, the use of an astringent mouth wash (containing zinc chloride) and a trial of penicillin troches. Since vitamin therapy has failed so far, only unusual methods would seem worth a trial. Sevringhaus has reported clearance of chronic mild stomatitis from the administration of large oral doses (50 mg.) of nicotinamide over a two to three week period.—J.A.M.A. per N.Y. Jour. of D.

There is properly no history; only biography.—Ralph Waldo Emerson.

POLAND IN THE WORLD OF SCIENCE

by IGNACE ZLOTOWSKI

Polish Representative to the United Nations Atomic Energy Commission

Condensed from Science

Perhaps the most tragic example of devastation that was brought about by the Nazi barbarians in the field of science was the destruction of scientific and cultural life in Poland. The Nazis pursued a ruthless policy of systematic extermination of intellectuals. Seventy members of the Polish Academy of Sciences perished, while 40-70 per cent of the total membership of university staffs were lost. One recalls here the case of Prof. Kalandyk, of Poznan, who served as a target for bottles thrown at him at a party for SS men. Hand in hand with the destruction of intellectuals went the eradication of Polish cultural life. Six thousand four hundred schools, 3,350 cultural institutions, 16,000,000 books, and 700,000 collections and maps were destroyed by the Nazis.

In spite of this overwhelming destruction, Poland is making tremendous progress in restoring higher education. Most of the universities that existed in prewar Poland have been reopened, and seven new ones have come into existence since the end of the war.

What are the problems that now confront the universities of Poland? Perhaps the following figures will help to answer the question. Nine hundred and eighty-two university chairs are occupied, while 630 are still vacant. Twenty-five per cent of all laboratories are still closed because of lack of personnel and equipment. There are present in Poland only 739 permanent professors and as 1,453 so-called "temporary professors" who either rotate among a few universities or teach simultaneously at a number of schools.

PENICILLIN AND CARIES ACTIVITY

by H. A. ZANDER and B. G. BIBBY,

Tufts College Dental School, Boston, Mass.

Comments and Summary of paper in Jour. of D. Research, Oct., 1947.

The results of animal experiments are in complete accord with those of McClure, who found that small amounts of penicillin added to the diet of cotton rats inhibited dental caries.

Our finding that penicillin interferes with carbohydrate fermentation by saliva in vivo and in vitro, and that it prevents caries in hamsters, suggests that this agent might have value in combating human dental caries. As far as is known penicillin has no effect either on dental structures or on mammalian metabolism and its activity is purely antibacterial. Nevertheless, this agent actively prevents caries in animals.

The only logical conclusion is that this caries-inhibiting effect is a result of antibacterial activity and/or

interference with carbohydrate fermentation. This is good evidence that these factors are important in the causation of caries.

SUMMARY

Minute amounts of penicillin inhibit acid formation in saliva-carbohydrate mixtures.

The capacity of saliva to ferment carbohydrates is eliminated for several hours following the use of a penicillin mouth wash.

Brushing penicillin mixtures on hamsters' teeth virtually prevents dental caries.

The above findings offer further evidence that the fermentation of carbohydrates by oral bacteria is important in the aetiology of dental caries.

ENDOCARDITIS IN THE ELDERLY

by EUGENE F. TRAUT, M.D., Chicago, Ill.

Associate Clinical Professor of Medicine, University of Illinois College of Medicine.

Summary of paper in Jour. of Wisconsin State D. Soc., Jan., 1948.

The finding of 2.2% of active endocarditis in 13,661 autopsies, agrees with previous figures.

Bacterial endocarditis commonly occurs in the elderly patients.

Active rheumatic endocarditis is uncommon but not rare after 45 years of age.

The vegetative or subacute form of bacterial endocarditis was twice as common as the acute or ulcerative type.

Almost two-thirds of the cases of bacterial endocarditis showed rheumatic scars.

Inability to find a predisposing factor for bacterial localization was three times more common in ulcerative than in vegetative endocarditis.

In this series of bacterial endocarditis

the ratio of male to female was 4 : 1.

Aortic valvulitis predominated in the group of bacterial endocarditis.

Mitral valvulitis predominated in the group of active rheumatic endocarditis.

Mitral stenosis appears to be a rare complication of active tuberculosis in this small series of 7 cases.

Congenital lesions were not important predisposing factors in this series of bacterial endocarditis of the elderly.

Our findings correct the conception that endocarditis is uncommon in the elderly.

Failure to recognize its important incidence in the elderly may cause the correct diagnosis of active endocarditis to be overlooked.

TECHNIQUES IN THE CONTROL OF OPERATIVE AND POSTOPERATIVE HAEMORRHAGE

by JOSEPH W. EWING, M.D., D.D.S., Akron, Ohio.

Summary of paper in Jour. of Oral Surg., Oct., 1947.

1. Any pathologic condition of the patient, as suggested by his history, should receive attention prior to operation.

2. A local anaesthetic containing epinephrine is an aid in haemostasis.

3. Tissue should be handled carefully in the interests of conservation.

4. Ligation of major blood vessels is of relatively little value in oral surgical procedures.

5. The roles of infection in post-operative haemorrhage should be kept in mind.

6. The use of topical haemostatic agents is recommended. Of these, epinephrine is fairly effective but has a fleeting action. Fresh muscle will release thrombin for a short period but is readily dislodged from the bleeding site. Fibrin foam causes no tissue reaction but is expensive, difficult to handle and must be placed on the bleeding site. Gelfoam may be compared with fibrin foam except that it is less expensive. Oxygel has all the merits of fibrin foam and Gelfoam and is the least expensive.

We have no more right to consume happiness without producing it than to consume wealth without producing it.—Candida, Act I.—George Bernard Shaw.

He sows hurry and reaps indigestion.—Robert Louis Stevenson.



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Editorials

DENTISTS FROM EUROPE

Certain pressure has been placed and is being placed upon those in authority to admit to Canada dentists from the Displaced Persons in European Camps. Our Canadian Dental Association Secretary has received great numbers of applications from such dentists and, at first look, it might appear very practical to admit some of these men when there is a shortage of dentists, at the moment, in some parts of rural Canada, however, our Association leaders have acted very wisely in questioning such a procedure and in taking the stand that these men must meet the requirements as demanded in each province by the Provincial Dental Boards, or, in other words, the same requirements as demanded of Canadian students.

It has been pointed out that these dentists are not trained to render the dental service expected by the Canadian public, also that the Canadian dental schools are filled to capacity and are not able to admit additional numbers which would be necessary to equip these men for practice in Canada. However, there are other reasons for moving slowly which, at first glance are not so obvious.

From Czechoslovakia comes the report that the need for doctors in the rural areas is desperate, that health authorities have not been able to solve the problem; that one aspect of the post-war situation is the fact that there is a relative surplus of practitioners who have specialized in some subjects while in other subjects there is a great need of specialists, e.g., pediatricians, *dental surgeons*, bacteriologists etc. The situation is even more critical in some other countries. The *Atlantic Monthly* reports in the January issue

that in Egypt, the most advanced of the Arab states, the death rate is even higher than in India, that in rural areas there is but one doctor to every 10,000 inhabitants; that in the whole of Trans-Jordan, three times the size of Palestine, there are twenty-four physicians and *five dentists*.

Those who favour admitting European dentists, with recognized lower standards, to this country at the present time, on account of the doubtful shortage of dentists here, should ponder these statements. It seems obvious that the services of all available dentists in Europe are urgently needed by the people of Europe and that any policy which would deprive them of this service should be carefully examined. Would it not be far more constructive, in the interest of world peace and happiness, to assist these European dentists to practice in Europe where the need is so great? M.H.G.

WHEN SHOULD PENICILLIN BE USED IN THE PRACTICE OF DENTISTRY?

In view of the more recent statements being made about this product, from authoritative sources, the answer to the above question would seem to be that it should not be used at all in trivial infections, which would clear up with traditional conservative methods.

A prominent British research worker¹ reports that the incidence of strains of *Staphylococcus pyogenes*, which are grossly resistant to penicillin, is increasing rapidly, that the rate of increase in some hospitals is so rapid as to become alarming, that in an analysis of a series of 100 patients in one hospital with *Staphylococcus* infection between February and June, 1947, it was found that as many as 38 yielded penicillin-resistant strains. In fact, it seems to be a general experience for some time past that penicillin-resistant strains are encountered with increasing frequency, and that they may acquire great resistance to the antibiotic within a very short time.

There is also the question of allergy. Toxic side-reactions and allergic symptoms following the administration of penicillin have lately attracted a good deal of attention in the U.S.A.² It is well to remember as well that there may be a considerable lag period between the administration of penicillin and the beginning of allergic manifestations.

A useful measure within the adoption by every dentist is to restrict the use of penicillin to cases in which there is a clear indication for its use. The present indiscriminate use seems to be a potent factor in breeding resistant strains of bacteria.

1. Mary Barbor, M.D., in *British Medical Jour.* Nov., 29, 1947.

2. A. G. Wilkinson, M.D. and K. Zinnemann, M.D., in *British Medical Jour.*, Nov. 29, 1947.

M. H. G.

A foolish consistency is the hobgoblin of little minds, adored by little statesmen and philosophers and divines. With consistency a great soul has simply nothing to do. Speak what you think today in words as hard as cannon-balls and tomorrow speak what tomorrow thinks in hard words again, though it contradict everything you said today.—Ralph Waldo Emerson.

CANADIAN APPEAL FOR CHILDREN

"Canadian children are lucky, living in a land of plenty. Other youngsters, no less attractive or good, are growing up under conditions that are almost impossible to describe. Food must be fought for, simple toilet necessities like soap are severely rationed, and toothbrushes have become real luxuries—schools, libraries, even churches were bombed into oblivion and have not been replaced. In fact every need of these children in war-devastated countries has been geared into a struggle for life itself.

"The Canadian Appeal for Children is for people in this country to help these youngsters grow up stronger and healthier. It asks for funds to provide the one supplementary meal that means the difference between gnawing hunger and some satisfaction to many people. This one meal, donated as it is by the people of fortunate countries to others which have been ravaged by war, is more than food—although that would not be necessary; it is a constant reminder to the hungry war-weary men and women of these lands that they have not been forgotten. That we know as well as they do how much the future of this world depends on their children.

"Our funds go into milk and meat, cod liver oil and fish; from this land of plenty into the hungry desolation of Europe—a living proof of our belief in doing unto others,' a helping hand in time of need.

"Dentists know how much our state of health depends on nutrition. They know that without adequate food for health and growth, without protection, the lives of children are in danger. The Canadian Appeal for Children asks us to back up this knowledge with action. Support this Appeal now. For these children are the future. If they are not saved, our world is lost."

M. H. G.

BOOK REVIEWS

Successful Dental Practice, by J. Lewis Blass, Ph.G., D.D.S. Lecturer on Practice Management in New York University College of Dentistry and Irvin Lulkin. D.D.S., post-graduate instructor in Dental Practice Management. 221 pages. Published by J. B. Lippincott Company, 2083 Guy Street, Medical Arts Building, Montreal.

This book presents a discussion of patient relations, patient education, treatment planning and business principles applicable in the conduct of a dental practice. It is thought provoking but the detail of procedures advocated will not be entirely accepted by every practitioner. In spite of this there are many good suggestions which make the book worth reading; for example a practice survey is included with condensed comments and results tabulated which is worth while for personal self analysis.

There are many good references at the end of each chapter for further review by the dentist who really wants to improve his practice management methods.

T. R. M.

1947 Year Book of Dentistry. Edited by Lester Cahn, D.D.S.; George W. Wilson, D.D.S. (Died the day this book went to press); Carl W. Waldron, M.D., D.D.S.; Stanley T. Tylman, D.D.S.; M.S.; George R. Moore, D.D.S., M.S.; Consulting Editor, Howard C. Miller, D.D.S., L.L.D. Published by the Year Book Publishers, 304 S. Dearborn St., Chicago 4, Ill. Price \$3.75.

This book is edited under the following headings, Oral Pathology and Oral Medicine, Operative Dentistry, Oral Surgery, Prosthetic Dentistry and Orthodontics and contains articles by 329 contributors selected from the

medical and dental journals of the world and includes also a special article by Lester R. Cahn on "Signs and Symptoms of Intraoral Cancer".

This book is really an encyclopaedia of dental information, presented in concise form and should prove most informative to the busy practitioner.

M. H. G.

Radio Manual, a Guide to Broadcasting for Mouth Health Education. Published by the Oral Hygiene Committee of Greater New York, 111 East 56th Street, New York City. Price \$4.00.

In 1939 the Oral Hygiene Committee of Greater New York published its first Radio Manual containing transcripts of forty-four talks given over WNYC in New York City. This present book contains fifty talks which were delivered by some of the outstanding members of the dental and allied health professions. It contains also a monograph on

mouth health educational broadcasting in its numerous aspects.

Radio broadcasting has become a vital and powerful force in public enlightenment. Nearly every home has a radio set of some description and the time has long since passed when we, as a profession, can neglect using the radio to inform the public of the value of mouth health.

To those who are interested in this field of service, to those who, from time to time, are called upon to address service clubs, church and social organizations on professional topics, to those who contemplate preparing dental educational literature for lay use, this book should prove of inestimable value.

The Oral Hygiene Committee of Greater New York represents not only the First and Second District Dental Societies but eight other Dental Societies as well as ten affiliated organizations.

This book will prove profitable to those who believe in "Prevention through Education," the theme of this publication.

M. H. G.

CANADIAN DENTAL ASSOCIATION NEWS

(From the Office of the Secretary)

Health Insurance Bill at Coming Session

Publicity has been released that a health insurance bill will be introduced at the coming session of Parliament. The release states that the bill is being drafted at the present time. This bill has been prepared, up to the present date, without consultation with the representative professional bodies involved.

It is stated that the bill is patterned largely on the original proposals, being divided into seven or eight divisions with costs separated so that any province will be in a position to accept any or all sections. Costs are to be divided between the Dominion and Province, probably on a 40 - 60 basis with the provinces responsible for collecting from individual contributors to offset their outlay.

Under this arrangement it is probable that certain provinces will enter the plan, and that others will not cooperate for the time being at least. However, it appears that a Dominion—Provincial Conference would be necessary in order to implement the scheme.

Another social security bill is also announced, namely a compulsory old age pension

scheme with a 5% income deduction, as the contribution. Does this mean competition between two social security measures as existed in 1944 when the health insurance and family allowances bills were considered, and the family allowance bill passed in the dying moments of the session? Or is it a political move to be debated in the house and made an election issue in the near future?

Calendar

April 5th & 6th—Council on Dental Education at Montreal.

April 6th - 14th—President's Visit to Eastern Canada Societies.

June 17th - 21st—Annual Meeting of Board of Governors.

June 21st - 24th—Annual Convention.

Wanted at C.D.A. Office

We desire to obtain a copy of Bulletin No. 19, entitled "Dental Education in the United States and Canada", as issued by the Carnegie Foundation. Information respecting the availability of a copy of this book will be appreciated.

NEWS FROM THE PROVINCES

NOVA SCOTIA

Halifax Dental Society

At the January 8 dinner meeting of this Society the guest speaker was Dr. J. G. Aldous, of Dalhousie Pharmacology Department. His subject was "Pharmaco-Dynamics of Anaesthesia". It was a scientific and interesting discussion of the clinical phase of anaesthesia.

Sydney Dental Society

The clinicians for the December meeting were Dr. Charles Sullivan, and Dr. John Burke.

Dr. Sullivan read a paper on "The Restoration of Fractured Anteriors in Children".

Dr. Burke spoke on "Pathological Processes of the Lips", remind us again that dentists have the opportunity of detecting malignancy in early stages. Both subjects were of much interest, and evoked a good discussion.

A committee appointed to study the inadequacy of the D.V.A. fee schedule, in order to bring it to the attention of the Nova Scotia Dental Association, and the C.D.A., promised to have its report for the next meeting.

Halifax Dental Nurses' and Assistants' Association

At the January 12 meeting of this Association, with Mrs. Ritcey, the President, in the chair, Dr. L. J. Archibald, President of the Halifax Dental Society, was the guest speaker.

A showing of the film, "Our Teeth" was given by Ken Reusch, a member of the Halifax Junior Board of Trade.

Col. W.G. Dawson to Head Dental Force

Lt. Col. W. G. Dawson of Halifax has been appointed to command No. 5 Field Dental Company of the Reserve Force at Halifax.

Lt.-Col. Dawson served as District Dental Officer at Halifax from 1940 until May, 1943, when he was transferred to Military District No. 2, Toronto, as District Dental Officer. He proceeded overseas in 1943 and was officer commanding No. 2 Field Dental Company with the Second Canadian Division when they went to Europe.

At the company headquarters Lt.-Col. Dawson will organize, train and administer a number of detachments which will be attached to units as the situation requires.

BRITISH COLUMBIA

College of Dental Surgeons of B.C.

At a meeting of the Council of the College held on January 17, Dr. R. L. Pallen was appointed Registrar-Treasurer of the College. Dr. William Miller, a former member was appointed to the Council to serve for the unexpired term of office and fill the vacancy created by the untimely death of Dr. W. J. Lea.

Vancouver and District Dental Society

The January meeting of the Society, held on the 6th, was "Home Talent Night" under the direction of Dr. Lloyd Chapman, who presented the following on the program of table and chair clinics":

Operative Dentistry, Dr. Lloyd Chapman,

Dr. L. W. Beamish, Dr. Jack Wark.

Orthodontia, Dr. G. A. C. Walley, Dr. R.

H. Crossley.

Periodontia, Dr. W. Gallagher, Dr. Eric Nordin.

Pedodontia, Dr. Gordon Jenks.

Prosthodontia, Dr. E. Pottinger.

Oral Surgery, Dr. Frank Smith.

These men really gave the membership something to take home and apply to the problems of every day practice.

The guest speaker for the evening was Cecil Merritt, V.C., M.P. whose subject was "Professional Liability Insurance and some of its Pitfalls". Here again was something of benefit to every day practice and was dealt with by Mr. Merritt in a most able manner. In addition to his ability as a lawyer and member of parliament Lieut.-Col. Merritt had a distinguished military career including the winning of the Victoria Cross at Dieppe.

Added to the rolls of the Society were Dr. C. D. Helmer, a graduate of the University of Illinois and Dr. R. I. Yorsh, a graduate of the University of Toronto.

A number of the members of the Society found time to attend the combined Washington State Association and Seattle and District Dental Society meeting held in Seattle on Jan-

uary 29, 30 and 31. This attracted an exceptionally large attendance and was an outstanding success.

On February 3 the Society held its regular meeting with Dr. M. J. Walley in charge at which time O. A. Thomas, B.A., D.D.S., M.S., Ph.D., of the School of Dentistry, University of Washington presented his lecture illustrated with slides on the subject of "Clinical Periodontia for the General Practitioner". Here again was material for every day use and presented in a manner to be easily assimilated.

Three schools were represented in members elected to the Society:—Dr. C. B. Lundahl, University of Oregon; Dr. T. P. Grady, Baltimore College of Dental Surgeons; and Dr. N. W. Huculak, University of Alberta.

Dr. Stibbs Honoured

Dr. Gerald D. Stibbs is receiving congratulations on his appointment as Professor of Operative Dentistry in the new School of Dentistry, University of Washington, Seattle, as of March 1, 1948. This is a distinct honour to British Columbia and Canadian Dentistry and those who know Dr. Stibbs will realize that he will bring to his new position a background of achievement and it is certain he will serve in this new capacity with great credit to himself and benefit to the profession.

Dr. Stibbs was graduated from the School of Dentistry, North Pacific College of Oregon in 1931 with the degrees of D.M.D., B.Sc. and is a member of Omicron Kappa Upsilon, National Dental Honorary fraternity. After graduating he practised in Nakusp, then Vancouver, B.C. He is a past president of the Vancouver Dental Society, the B.C. Dental Association, the Vancouver Ferrier Study Club (Gold Foil), has been a member and instructor to the Vancouver Diagnosis Study Club (X-Ray). He is presently B. C. Representative on the Associate Committee on Dental Research, National Research Council; B. C. Representative on Research Committee, Canadian Dental Association; Member of Committee on Ethics, Canadian Dental Association and member of the Council of the College of Dental Surgeons of B.C., Member A.F. & A. M., A. and A.S.R.

Since graduating he has given many clinics and several courses of instruction throughout Oregon, Washington, British Columbia, Al-

berta and Eastern Canada and has made valuable contributions to dental literature.

We wish Dr. Stibbs the highest degree of success in his new undertaking.

Vancouver Dental Assistants' Association

In Chris's Grill on January 12, fifty-eight members of this Association met to hold their annual meeting and election of officers for 1948.

Guests of the evening were members of the Executive of the Vancouver Dental Society—Drs. E. Nordin, W. D. MacLeod and K. McWilliams.

Following the regular monthly business meeting, annual reports were read by each of the officers. The election of officers for the new year then took place. Those elected were as follows:

President	Miss Gay McMasters
Vice-President	Miss Jean Parker
Secretary	Miss Gwen Hilliard
Treasurer	Miss Jean Hunter

Upon announcement of the election results, installation of the new officers was held, highlighted as in other years by the impressive candlelight ceremony and presided over by Dr. E. R. Nordin, president of the Vancouver Dental Society.

GWEN HILLIARD, SECRETARY.

ALBERTA

Edmonton and District Dental Society

Dr. S. D. Fraser and Dr. A. McEwen Edmonton practitioners and members of the staff of the Dental Faculty, University of Alberta were the guest speakers at the February meeting of this Society, at which forty-five members were present. They spoke on "Phases of Prosthetic Dentistry."

Dr. Leo Lyman was introduced as a new member of the Society and welcomed by the President Dr. P. J. Kendal. He is associated with Dr. B. Shlain.

G. Y. BARNETT.

Lethbridge Dental Society

At the January 21 supper meeting of this Society twenty-three men attended to hear Dr. J. D. McLean of Edmonton present his clinic on Gold Inlays. Out of town men present

included Dr. Burgman, of Blairmore; Dr. Goodman, of Coleman; Dr. Willigar, of Pincher Creek; Dr. Blackmore, of Claresholm; Dr. Geering, of Cardston, and Dr. Lynn, of Taber.

D. A. RYLANDS

MANITOBA

Winnipeg Dental Society

At its February meeting the Winnipeg Dental Society had the privilege of a demonstration by Dr. C. Garland, of Fort Frances, Ontario, of how to economically conduct a dental practice.

To Dr. Garland's economy includes more than financial economy. It means saving one's health, and the patient's time. Saving the dentist's health includes the use of ancillary services at the chair and in the laboratory. The use of these services saves the dentist's time, which means seeing more patients and incidentally increasing his gross income.

It may be doubtful if many dentists have the natural organizing ability to even approach the perfection exhibited in Dr. Garland's practice, but one never knows until he tries and one can always shoot at the stars.

Dr. Garland has quite unusual ability as a clinician and would make a wonderful professor in any line in a dental college, but particularly in Economics which subject receives a minimum of attention at the present time.

J. F. M.

Winnipeg Dental Nurses' and Assistants' Association

Fifty members attended the February 9 meeting of this Association.

Dr. John Abra gave a lecture on Orthodontia. It was illustrated by slides which were of great interest to the members.

Jane McClure, Social Convener, thanked Dr. Abra.

DOROTHY McCULLOCH

ONTARIO

Faculty of Dentistry News University of Toronto

Report of the Council on Dental Education

The Council on Dental Education of the Canadian Dental Association, convened at the University of Montreal, December 15 and 16, 1947. The Deans of all Canadian dental faculties were in attendance.

Many matters of vital dental importance were discussed, such as: undergraduate admission

requirements, length of academic course, curriculum, full or part time teaching assignments, provision for hospital training, library requirements, limitation of student enrolment, admission with advanced standing, and provision for instructing dental hygienists.

Staff Member Attends Post-graduate Course

Dr. G. W. Johnston, an associate in dentistry, who is giving instruction in the pre-clinical operative laboratories and in the clinic, has taken a two-weeks' post-graduate course in operative dentistry at Ann Arbor, under the auspices of the W. K. Kellogg Foundation Institute.

New Appointments Announced

Dr. D. W. Gullett has consented to accept the appointment of Associate in Dental Praxis, succeeding Dr. F. J. Conboy, who recently retired from the teaching staff. He will lecture on the history of dentistry, ethics, and jurisprudence.

Dr. Gullett is exceptionally well qualified for his new duties having had wide experience in the dental field through his position as Secretary-Registrar of the Royal College of Dental Surgeons of Ontario, as well as Secretary of the Canadian Dental Association.

Dr. R. P. Lowery, as Associate in Dental Praxis, succeeds Dr. L. Kilburn who recently resigned from the teaching staff. Dr. Lowery will lecture on dental economics and practice management, in which he has long been interested through the several offices held in the Ontario Dental Association and the Academy of Dentistry. His advice on matters of dental policy will be of great value in all conferences. Dr. J. E. Moser, one of the more recent graduates of this Faculty, has been appointed a demonstrator in dentistry and has been assigned to the department of radiology. Dr. Moser plans to enrol for post-graduate instruction in radiology at the University of California. This is made possible through a W. K. Kellogg Foundation Scholarship to this Faculty. The generosity of the Kellogg Foundation in providing for teacher instruction is greatly appreciated and is bound to show splendid results in the years to come.

Extra Mural Lecture Presented

February 3, Dr. R. L. Twible—Brant County Dental Society (Brantford).

February 15, Dr. J. H. Johnson — Kent County Dental Society (Chatham).

February 26, Dr. P. G. Anderson—Essex County Dental Society (Windsor).

These lectures are arranged for Ontario dentists by the Faculty of Dentistry in collaboration with the Royal College of Dental Surgeons of Ontario.

In addition to these lectures members of the teaching staff have accepted invitations and have presented papers at dental meetings, as follows:

February 2, Dr. S. A. MacGregor—Children's Dental Health Day (Cleveland).

February 8, Dr. G. C. Hare—American Association of Endodontics (Chicago).

February 23, 24, 25, Dean Ellis Convention of the Minnesota State Dental Association (Minneapolis).

Post Graduate Course in Orthodontics

Complying with a number of requests received from dentists for a course of instruction in Orthodontics, arrangements have been completed for the organization of such a class to be conducted in this Faculty, by members of the staff, commencing Wednesday afternoon, March 3, and continuing weekly until May 12, 1948. The enrolment will be limited and already several applications have been received.

Library

Recent additions to the library include:

American Association for the Advancement of Science—Blood, Heart, and Circulation.

American Association for the Advancement of Science—Research Conference on Cancer, 1946.

Bennett, Harry, ed. Concise Chemical and Technical Dictionary. 1947.

Foerster, N.S. and Steadman, J.M.—Writing and thinking. 1941.

Fouchard, Pierre—The Surgeon Dentist. Translated by Lillian Lindsay.

Toronto Study Club Dental Technicians

Mr. Henry Cavill of Montreal was guest speaker before this society at the regular meeting on January 14, in the Royal York Hotel. The speaker gave an interesting discussion of the progress made in the dental laboratory industry, dealing in particular with the economics of operation. Mr. Cavill indicated many ways in which expenses may be controlled and yet keep the standard of the dental laboratory on a high level. He further emphasized that technicians must continually

improve their techniques and use materials intelligently. By this measure they will cut expenses as they strive to give a higher quality of service to the profession.

President Mr. J. Tebbutt expressed the thanks of the members to Mr. Cavill who had been ably introduced by Mr. H. Elliott.

C. BLANDFORD.

Niagara Peninsula Dental Association

Dr. W. A. MacLean, of St. Catharines, was presented with an honorary membership in this Association and a card case, with sterling silver plaque, at the January 16 meeting. The presentation was made in recognition of Dr. MacLean's having been in practice for over fifty years.

Dr. Ralph G. Peterson, of Minneapolis, Minn. was the speaker of the evening. His subject was "Acute Infection of the Face and Jaws" and proved very interesting and instructive. The President, Dr. D. C. Johnstone, of Niagara Falls, presided.

Ladies Auxiliary Academy of Dentistry, Toronto

Saturday, February 21 was a Red Letter Day for this society—it was the day of its bridge, fashion show and lucky number draw sponsored to raise funds to equip the new dental clinic for the Children's Aid Society.

The response from members of the auxiliary and their friends was tremendous. The Concert Hall of the Royal York Hotel had been reserved but advance sale of tickets indicated the need for more space. Another room was secured but even it overflowed which all adds up to a most successful function that put the auxiliary's objective well within financial reach—an amazing accomplishment for one year's effort.

Mrs. M. G. Boyes and Mrs. L. R. Davison received the guests. Mrs. A. J. McDonagh with past presidents Mrs. R. L. Thomas, Mrs. E. C. Veitch, Mrs. L. D. Drewbrook, Mrs. L. Schumaker, Mrs. S. S. Crouch, Mrs. K. R. Harris, Mrs. E. T. Guest, Mrs. F. L. Dayment, Mrs. R. W. Matchett and Mrs. L. R. Davison made the lucky draws. Mrs. Davison with Mrs. Conboy, Mrs. Cooper and Mrs. Philip announced the winners. Hostesses included Mrs. R. G. Ellis, Mrs. K. M. McPherson, Mrs. A. B. Sutherland, Mrs. C. I. Treadwell, Mrs. F. H. Shepherd, Mrs. J. E. Veitch,

Mrs. J. G. Paterson, Mrs. J. A. Milburn, Mrs. H. G. Bean, Mrs. R. W. Freestone, Mrs. W. G. McIntosh, Mrs. G. J. Walker and others.

The members of the Auxiliary wish to express their thanks to all who so kindly assisted in the success of this occasion by their presence and their financial help and a special thank you, to those whose donations made possible such a splendid prize list. There were 160 winners including a feature prize for a \$50.00 merchandise voucher.

D. E. PATERSON

Ladies Auxiliary To London Dental Society

This Association has held seven meetings with an average attendance of twenty. Mrs. M. Cunningham is the president.

The programs are varied and interesting. An address by Mrs. D. J. Alsop who worked for the underground while a dental student in Holland was most interesting. Her subject was "Life in War Time Holland."

Other topics for meetings were—An Irish Program, England from a Woman's Point of View, Social Service, and History of Canadian Art.

The Auxiliary made a donation of baby blankets to the Children's Aid. At Christmas the members dressed twenty dolls and presented a shower of gifts to Westminster Hospital. Three parcels of food were prepared and sent to England.

BERNICE SQUIRES

Dental Alumni University of Toronto

The annual dinner will be held at the Arts and Letters Club, 14 Elm Street, Toronto, on April 8 at 6.45 p.m.

Dr. W. J. Deadman of Hamilton will be the speaker and his subject is "Seventeenth Century Medicine." Dr. Deadman is a very interesting speaker with no little humour. Every dental Alumnus should plan to be on hand.

Tickets available from any of the executive or by contacting the secretary, Dr. Roy Kerr 509 Danforth Ave., Toronto, H.A. 3237.

Academy of Dentistry, Toronto

Dr. P. G. Anderson was guest speaker of his own society on February 18. The subject was "Procedure in the General Plan of Mouth Care", and it was presented in a very instructive and delightful fashion.

The honour of being invited to appear before his home society is a high compliment to Dr. Anderson's ability as a teacher and a lecturer which is well deserved.

Academy Executive officers for 1948-49—Past President, Harold Shepherd; President, J. H. Johnson; President Elect, Edgar A. White; Secretary, Earl A. Bancroft; Treasurer, Gordon Frawley.

Councillors—North Toronto, M. G. Boyes; East Toronto, Wm. A. Shand; Central Toronto, John S. Wilkinson; West Toronto, R. C. Moore; Downtown, A. R. Scott.

EMPIRE NEWS

GREAT BRITAIN

Approaching Crisis

*Condensed from Editorial in British D. Jour,
Feb. 6th, 1948*

On the two major issues of Grant-in-Aid and prior approval of estimates for treatment the Consultative Committee failed to obtain any concessions from Mr. Bevan beyond a vague assurance that if in practice the Regulations with regard to the approval of estimates proved to have a limiting effect or to be irksome they would be looked at again. On Grant-in-Aid the Minister was adamant and it is clear that unless the Board were prepared to abandon their oft repeated conclusion that it would not be possible to provide a

satisfactory dental service for the nation otherwise than under a system in which Grant-in-Aid found a place, they could not advise the members of the Association to accept service under the Act. Mr. Bevan is reported to have told the Consultative Committee that if a considerable number of dentists refuse service, as indeed they were entitled to do, then he would have to put up with it and make use of the services of those who would participate. But no one knows better than he does that unless a substantial majority of the dentists in the country are prepared to accept service, the general dental service can be no more than a shadow of what a comprehensive dental service could be

No matter how much better the scale of fees may be than it has been in the past, Dental Benefit, writ large, will never attract a sufficient proportion of the best and most progressive elements in the profession. The very fact that under a rigid scale of fees the careful painstaking operator will be penalized to a greater or less extent makes this inevitable, since every practitioner, whatever may be the degree of his skill or the length of his experience, will be paid precisely the same fee for each operation scheduled in the scale. Under such a system the main incentives will be towards greater speed in working and economy of expenses, neither of which is necessarily concomitant with better dentistry. In the past the experience and acquired skill of a successful practitioner have been reflected in the increased remuneration he has been able to command or conversely in decreased effort. If Mr. Bevan has his way, these normal incentives will only be operative in private practice outside the Health Service.

Far be it from us to suggest that financial considerations are the only, or even the principal, ones which govern a dentist's conduct of his practice, but it is unrealistic to ignore the effect of incentive in maintaining and improving the general standard, or not to appreciate that the combination of a rigid scale of fees and the requirement that proposals for treatment are to be subject to the approval of a third party is likely to lead to a gradual levelling down of the standard of treatment. If this were to happen it would be detrimental to the best interests of the nation, the Health Service and the profession alike. Clearly the Association could not recommend its members to take part in a scheme which might have such a disastrous result. During the long months for which the Consultative Committee has been engaged in detailed discussion of successive drafts of the general dental service regulations the profession has waited patiently in the hope that their labours might result in the production of a scheme which, by enlisting the whole-hearted cooperation of the great majority of dentists in general practice, would provide a dental service for the people of which both the nation and the profession could be proud. That this hope has been disappointed is no fault of the Consultative Committee.

If the scheme is accepted the traditional

relationship between patients and practitioners will give place to one in which the chief responsibility of the latter will be to the State. Experience of dental benefit in the past has shown that the pressure of the machine will inevitably create a subconscious tendency for dentists to advise lines of treatment which they think are likely to be acceptable to the Dental Estimates Board and the Dental Officers of the Ministry rather than to enter into lengthy correspondence or to subject their patients to the irritating delays which the latter course might entail. A national service founded on premises of that kind cannot be expected to appeal to the profession nor to give the public the kind of dental treatment which it has a right to expect.

Note by Editor of the Journal of the C.D.A.:—We are advised that the advice to members of the British Dental Association to refrain from entering the Government service only applies to private practitioners and does not apply to public dental officers employed by local health and educational authorities, nor to dentists working in hospitals. We are further advised that the medical profession is conducting a strong campaign to persuade general practitioners to refuse to take service under the Act. The main ground for their objection to the scheme is that the Government is proposing that a medical practitioner should be remunerated partly by salary and partly by a capitation fee for each patient on his list. The basic salary is £300 per annum and the capitation rate 15/6 per annum. The doctors object to the basic salary on the ground that the Minister of Health could at some future time increase this which he has power to do by regulations under the Act, with the result that he could turn the service into a wholly salaried service. This, the doctors contend, would be against the best interests of both the public and the profession.

By a majority of eighty-five votes to four, with nine members abstaining from voting, the Representative Board of the British Dental Association resolved to recommend that all members of the Association exercise their right under the Act to refuse to enter the Service until the Act and its Regulations are amended so as to include the principles advocated by the Association. It was further resolved that the Association is prepared in the public interest to maintain, with no sense of

commitment, its contact and discussions with the Ministry of Health in order that amendments may be obtained to the Act which would ensure a satisfactory dental service for the public.

A late report states that Mr. Bevan has announced the postponement for a long time, at least, of any construction of health centres.

AUSTRALIA

Flying Doctor Service

"Australia's four 'flying doctor' services carried 603 patients and flew 289,239 miles in the last year, in addition to treating many persons at 'outback' homesteads and nursing homes and giving medical advice by radio."—*N. Y. Times* per Public Health Economics.

GENERAL NEWS

Children's Emergency Fund

Last December the United Nations International Children's Emergency Fund was set up to aid needy children and expectant and nursing mothers in all parts of the world. An approximate survey showed that at least 60 million children in Europe and the Far East urgently required supplementary feeding and other help. The fund is still handicapped by lack of money; but aid is already being provided to between 4 and 5 million children in twelve European countries.—*The Lancet* per Public Health Economics.

Dental Education

Full approval has been voted to six additional dental schools by the Council on Dental Education of the American Dental Association.

The School of Dental Medicine of Harvard University, at Boston, has been added to the Council's list of approved dental schools for the first time.

Five other schools which previously had been granted provisional approval by the Council have been voted full approval. They are:

The School of Dentistry of the College of Physicians and Surgeons, at San Francisco.

The College of Dentistry of Howard University, at Washington, D.C.

The School of Dentistry of Temple University, at Philadelphia.

The School of Dentistry of the University of Washington, at Seattle (first two years).

The School of Dentistry of St. Louis University, at St. Louis.

As a result of the current action by the Council, thirty dental schools in the United States now have full approval from the American Dental Association. Nine others

have provisional approval. Only one dental school in the nation is not on the approved list of the American Dental Association.

The Woman's Home Companion Over-simplifies the Laboratory Problem

Condensed from Editorial in *Jour. A.D.A.*, Feb., 1948

The *Woman's Home Companion*, using the techniques of "fear advertising" so readily to be found in its own advertising columns, has discovered "Bootleg Dentistry".

"Bootleg Dentistry," knowingly or not, glibly advances "solutions" that have been rejected as unsatisfactory by the dental profession but not by some laboratories which hope ultimately to build a case for serving the public directly. It repeats the time-worn fallacy that individual examples of irregularity and incompetence found in every walk of life can discredit a whole profession. It fronts for the commercial groups which believe that the ownership of special mechanical gadgets is incontrovertibly essential to the rendering of a competent health service. It reiterates the canard that the majority of dentists are unable to evaluate the worth of a prosthetic appliance merely because they themselves do not apply the blowtorch to melt the metal of which the appliance is composed. It makes the usual threat of the self-appointed crusader who offers little but rhetoric to solve a problem: "Unless the dentists act first to clean up this unsavoury side of their profession, some day an aroused public may do it for them."

Such intervention by an aroused public would be welcomed by the dental profession. Long before the *Woman's Home Companion* discovered "Bootleg Dentistry," the profession had been almost alone in recognizing the dan-

gers to public health inherent in it. Largely through the efforts of dentists and dental societies, laws have been enacted in every state which, when enforced, can control illegitimate dental practice by technicians, laboratories or anyone else. Dental societies are not official agencies and cannot enforce laws but almost every society maintains a committee to aid proper authorities in such enforcement. The fact remains, however, that the lack of enforcement of dental laws represents one of the worst areas of neglect in modern public health practice. Undermanned enforcement agencies, lack of appreciation of the danger to health that is created through illegal dentistry and simple indifference to statute are the greatest breeders of illegal dental practice.

To the extent that it arouses public opinion for better law enforcement, the article is helpful. To the extent that it uses false assumptions and misinformation to build an ill considered solution, it is not.

American Academy of Oral Pathology

At a meeting of this Academy held in Chicago on February 8, 1948, the following officers were elected:

President:—Lester R. Cahn, Columbia University

President-elect:—Paul E. Boyle, University of Pennsylvania

1st Vice-President:—Lester R. Burket, University of Pennsylvania

2nd Vice-President:—Henry M. Goldman, Boston, Massachusetts

Editor:—Hamilton B. G. Robinson, Ohio State University

Secretary:—Joseph L. Bernier, Army Institute of Pathology

A total of twelve papers on various phases of Oral Pathology were presented by Oral Pathologists from various institutions throughout the country during the all day meeting of the Academy.

Dermatitis Reported by 500 Dentists

Occupational dermatitis among dentists is far more common than was generally realized, it is indicated by preliminary results of a new survey by the Council on Dental Therapeutics of the A.D.A. In cooperation with editors of the dental journals and one of the larger manufacturers of dental drugs, the Council

has compiled a list of more than 500 dentists who are subject to occupational dermatitis. Among substances thus far reported to be a cause of this condition are procaine (novocain), monocaine, butyn, zephiran, formaldehyde, pontocaine and various dental laboratory materials.

Greater New York Meeting Receives Large Attendance

Willard S. Bell, chairman of the Organization Committee for the 1947 Greater New York Dental Meeting, recently issued the statement that there was a total registration of 14,454 dentists during the five day meeting held at the Hotels Pennsylvania and New Yorker on December 8 to 12.

The Greater New York Dental Meeting was held under the auspices of the First and Second District Dental Societies.

The Fourth Annual Seminar for the Study and Practice of Dental Medicine

The West Coast's Fourth Annual Seminar for the Study and Practice of Dental Medicine was held at the Ahwahnee Hotel, Yosemite Valley, California, October 19 to 24, 1947.

More than 200 dentists, physicians and research scientists, were in attendance throughout the five day session, as well as nine lecturers from five leading educational institutions.

All meals served during the Seminar were planned by Dr. Michael J. Walsh, consulting nutritionist of San Diego, California, as practical demonstrations of types of diets which may be recommended for dental patients. Omitting all sugars, ice cream, and pastries, the meals combined the maximum possible quantities of essential nutrients with the minimum number of calories so that "the seminarians might return to their offices at the conclusion of the Seminar with a sense of physiological well-being", according to Dr. Walsh.

Highlights of the lectures were as follows: The opening speaker, Dr. Edwin McMillan, Professor of Physics at the University of California, talked on "Application of Nuclear Physics in Biology and Medicine." Dr. McMillan gave a brief review of nuclear theory and described the cyclotron and the uranium

pile as the two means of making radioactive materials. He discussed the method of using the so-called tagged atoms in tracer studies and pointed out that in these experiments the amount of radiation is too small to produce any physiological effects. The nuclear physicists can furnish the active isotopes and the detecting equipment but the experiments must be planned by those who know the problems to be answered in their own fields of interest, he said. Relatively little has been done with tracers in fields connected with dentistry, where there are great opportunities for pioneer work.

Dr. William A. Albrecht, Professor of Soils, College of Agriculture, University of Missouri, spoke on the general subject, "Climate, Soil and Health". In the first lecture, "Climatic Soil Pattern and Food Composition", he pointed out that food quality comes from the soil, but bulk from the weather, since many more and larger quantities of nutrients or fertility of the soil are required for proteins than for the production of carbohydrates. In general the United States gives a picture of highly weathered soils in the East and Southeast, leached of their fertility by high rainfall, while the Western half under lower rainfall represents soils under construction where the vegetation is mineral-rich, and where the legume crops grow naturally.

In his second lecture, "Managing Health via the Soil", Dr. Albrecht pointed out that while the infectious diseases have been put under control, the degenerative diseases have increased. He gave statistics to show that increasing caries go with decreasing soil fertility and suggested that calcium as a fertilizer has more value than merely counteracting soil acidity. Poor health and teeth may be linked to soil deficiencies in phosphorus, calcium and other nutrients, he thinks. Management of animal health via the soil is already being practised, he reported, and directed attention toward the possibilities of preventive medicine by means of the quality of food in terms of the soils which grew them.

Dr. L. H. Newburgh, Professor of Clinical Investigation in the Medical School, University of Michigan, spoke on "Man's Energy Requirements". He described the bomb calorimeter, used to measure the amount of poten-

tial energy in food, and showed that only 70 per cent of the energy in protein is available to man. He discussed basal metabolic rate, and the work performed by the body both internally and externally.

Dr. Isaac Schour, Professor of Histology, College of Dentistry, University of Illinois, spoke on the "Development and Growth of Teeth", which he said is a progressive, orderly, and timed schedule of dynamic stages and events. He stated that the growth of the enamel of a permanent tooth takes about six years, but the development of the entire tooth is a lifelong process that ends only with its extraction or the death of the possessor. He outlined the successive phases in growth and calcification, discussed tooth ring analysis, hypocalcification and mottled enamel, and the tooth as an indicator of health and disease. Many clinical conditions which confront the dentist in his daily practice are of developmental origin and can be understood and classified best in terms of the particular stage of development from which they arise.

Nutrition, Growth, and Development, was the subject of Dr. John B. Youmans, Dean of the College of Medicine, University of Illinois. Deficiencies of nutrients if severe may prevent conception or if less severe may result in abortions or still births, he said. Lack of proper food for the mother may cause poor general development of the child, underweight and illnesses such as beriberi, scurvy and rickets. In animals specific nutritional deficiencies also have been found to produce certain congenital anomalies and defects. He pointed out that children under a limitation of various nutrients cease to grow or slow their growth rate and delay maturation. His second talk dealt with the nutrition needed by adults for the maintenance of normal tissue structure and the performance of certain bodily functions, as well as the repair necessitated by injury or disease. When there is deficiency of calories the body uses first its small reserves of carbohydrates and glycogen, then its stored fat, and finally the native protein of tissues and organs; this latter results in loss of endurance and other disturbances, he said. He discussed protective mechanisms, hunger oedema, the role of the amino acids, and the part which the vitamins A, C, D and folic acid play in undernutrition.

Dr. Howard B. Lewis, Professor of Biological Chemistry, University of Michigan, spoke on the Biological Functions of Proteins and stated that no life appears possible on our planet without these substances. He discussed the size and molecular weight of the protein molecules and pointed out that they are composed of amino acids joined together in peptide linkage, that they are almost infinite in number, and exhibit a species specificity. Digestion in the body breaks the proteins into amino acids which are absorbed by the tissues and used by the body to form new proteins of the cells, body fluids, hormones and enzymes. Excess acids are deaminized and the nitrogen excreted as urea.

Dr. Lewis' second lecture dealt with the Role of Amino Acids in Nutrition. Ten amino acids were found to be essential for growth and development of the white rat. The essential amino acids for man were studied by means of nitrogen balance and mixtures of amino acids are being used clinically as protein hydrolysates, he said. Standards for protein recommend 70 grams a day for a 70 kilogram man and 60 for a woman weighing 56 kilograms, with recommendations for pregnancy and lactation greater. These should be selected from a wide variety of diet sources.

Dr. Allan G. Brodie, Professor of Orthodontia and Dean of the College of Dentistry, University of Illinois, talked on "Growth of the Jaws and Eruption of the Teeth", giving a synthesis of findings of his own investigations and those of a number of other workers. "The pattern of the head skeleton is laid down well before birth", he said. The brain, soft palate and tongue are well advanced in development at birth and the brain case has much of its growth but its parts have not coalesced. He outlined the growth of the maxilla and mandible, giving the growth sites as revealed by vital staining and stated that these sites are so perfectly coordinated that no changes in proportion occurs between infancy and adulthood. He said the presence or absence of teeth has no effect on this growth.

In his second talk, "Eruption of the Teeth and Growth of Alveolar Bone", Dr. Brodie discussed the relationship between alveolar bone growth and teeth development and eruption. He pointed out several phenomena associated with the eruption process that lead

to changes in relationships between the two dentitions, and emphasized the fact that variation shows itself in every detail in developing teeth and bone.

Dr. Gustav W. Rapp, Professor of Chemistry and Physiology, Chicago College of Dental Surgery, Loyola University, discussed the mechanism of enzyme action. He defined an enzyme as a special kind of catalyst produced by living cells, and said they seem to be made of three main components: the apo-enzyme, a large specific protein particle; the co-enzyme, a non-proteinaceous organic molecule; and a metallic ion. Their mode of action apparently consists of a physical absorption of the substrate component onto the surface of the enzyme molecule, a specific chemical reaction between the substrate components, and desorption or removal of the changed substrate from the enzyme surface.

In his second lecture, An Enzymatic Theory of Local Anaesthesia, Dr. Rapp discussed the theory of nerve impulse and pointed out that the common local anaesthetics are, up to a certain point, similar in structure to that of acetylcholine, by means of which nervous energy is produced. It would seem that the anaesthetics have the necessary qualifications for the first phase of the enzyme activity but not subsequent ones, he said.

The final lecturer, Dr. Thomas Francis, Jr., Professor of Epidemiology, School of Public Health, University of Michigan, spoke on Viruses as Agents of Disease. The viruses tend to attack a specific type of cell and cause a specific tissue injury, as well as causing some types of tumours, he said. Many viruses have inclusion bodies, all require living cells for their propagation, and stimulate immunological reactions on the part of their host. He gave a classification of virus diseases and pointed out that the mouth constitutes the greatest single portal of entry of virus disease in man.

In his second lecture, The Prevention of Virus Diseases, Dr. Francis said the presence of antibodies is not synonymous with immunity, and their significance depends upon the mechanisms involved in the individual diseases. He discussed immunization by both active and inactive viruses, and prevention or modification of virus diseases by use of immune sera. Recent work has opened up the

possibility of non-specific immunity by means of the phenomenon of interference in which a chemical or a harmless virus can be used to block the entrance to the cell, or in which the physiological conditions of the cell are so modified that it no longer serves as an efficient host to the virus.

Plans are now being made for the Fifth Annual Seminar for the Study and Practice of Dental Medicine which will be held at The Desert Inn, Palm Springs, California, October 17 to 22, 1948.

A.D.A. Membership Figures for November, 1947, Announced

The total membership of the American Dental Association as of November 30, 1947, is 68,775. The membership reads:

Regular members (states, territories, Public Health Service and Veterans Administration)	65,935
Undergraduate members (colleges and universities)	1,955
Life members	885
Total members	68,775

Chronic Invalidism

Today, in a period of full employment, the biggest single factor creating need for assistance among families throughout Illinois is chronic invalidism. Circumstances which, in general, hold true for the country as a whole are partially accountable for this fact. Two generations ago, more than 90 per cent of deaths were caused by acute diseases following short periods of illness. Today, because the broad advances of the last quarter century in medical science and public health, people seldom die of pneumonia, diphtheria, typhoid and the other quick killers of the Nineties. Instead, more than two-thirds of deaths are caused by chronic diseases, following a long period of invalidism. The leading role of killer is played by diseases of the heart and circulatory system. Cancer is in second place, and the two together account for considerably more than half the total number of deaths.

For two rather obvious reasons, this drastic shift is throwing more and more people on assistance as a last recourse. Although the 'Blue Cross' and other insurance plans offer a way for the prudent and thrifty person to

anticipate and provide for the cost of acute illness, the overwhelming burden of the cost of chronic invalidism makes it impossible for most families to finance the necessary care. And often, even more tragic than the situation of the chronic invalid himself, is the tyranny imposed upon other members of the household who must sacrifice careers, or their own normal life, in the attempt to care for him. Small wonder that these devastating consequences exert a steady demand for relief through public assistance. . . .

Yet, even with present limited medical knowledge, we have found that between 8 and 12 per cent of the severe chronic invalids might have been cured, or the disease mitigated so that extensive care would not have been needed if their cases had been diagnosed and threatened in the early stages of the diseases. When we add to these, substantial numbers who by rehabilitative services can be restored to a reasonably normal and self-sustaining regime of life, we estimate that approximately 20 per cent of our chronic invalidism is now preventable.—Raymond M. Hilliard, "Chronic Illness," *Survey* *Midmonthly* per Public Health Economics.

Haemorrhage

Successful use of oxidized cellulose to prevent haemorrhage following tooth extraction is reported by a group of San Francisco dentists in the *Journal of the American Dental Association*.

Drs. C. D. Gwinn, D. H. Brimm and E. B. Ferber, of the Division of Dental Surgery, University of California, tested the substance on a number of patients who had a history of prolonged bleeding after extraction of teeth and other surgical operations.

The substance, they said, is superior to treated cotton or gauze in that it does not have to be removed from the socket but is absorbed or dissolved in the body without producing marked irritation or interfering with healing.

In all, the group used oxidized cellulose on 57 patients who had a history as bleeders. One patient, they reported, experienced only minor bleeding after an operation in which oxidized cellulose was used as a haemostatic agent. This same patient had bled for four days following a tonsillectomy.

Another patient with severe anaemia had

had more than 100 blood transfusions following an operation on the spleen and had complained of bleeding gums. A lower bicuspid was extracted with no post-operative haemorrhage.

Foundation to Study Diseases of Old Age

Plans for establishing a foundation to finance medical research in the increasing problem of caring for the ailments of an aging population were reported December 16 at a dinner of the American Pharmaceutical Manufacturers Association . . . The new group, to be known as The Pharmaceutical-Medical Research Foundation, will be supported mainly by the pharmaceutical industry and directed by representatives of that industry and of the American Medical Association, according to Dr. Morris Fishbein, editor of the *Journal of the Medical Association*, who made the announcement.

Referring to the organization of a committee to establish the foundation as an 'epoch-making event of great importance in the history of medicine and pharmacy', Dr. Fishbein said that 'it is contemplated that the initial basic research by the foundation will be in the field of the degenerative diseases, where there is urgent need for it'. The degenerative diseases, usually associated with the process of aging in the human body, in-

clude high blood pressure, obesity, diabetes, and heart ailments. About \$250,000 will be made available for research in the first year, Dr. Fishbein said, with most of the fund going to institutions already conducting work in these and similar fields.

Describing the importance of research on the degenerative diseases, Dr. Edward L. Bortz, president of the American Medical Association, declared that hardening of the arteries and high blood pressure cost half a million lives a year. 'The human life span will be further increased,' he said, 'when premature deterioration of tissues due to abnormalities in the intermediary metabolism of fats, proteins, and carbohydrates is more clearly understood. Vascular degeneration is one of the major problems facing science today.' If the life cycle for the human body does go through the curve of evolution, development and senescence as that of the lower animals, Dr. Bortz added, 'it would seem that premature deterioration is an all too common condition today. According to this theory', he said, 'If a man is physically mature at 25, then he should have an average normal life span of 150 years. If this is an observation of value and represents the potentialities of natural rhythmal existence, then man still has not nearly approached the optimum, or the possible life span, since today he averages only 68 years of age.'—*N.Y. Times* per Public Health Economics.

IN MEMORIAM

C. S. MacArthur, of Truro, Nova Scotia, died suddenly from a heart attack on February 11. He was graduated from the Baltimore College of Dental Surgery and practised at Parrsboro before opening his practice in Truro some forty-five years ago.

He was a Past-President of the Nova Scotia Dental Association and served for a time on the Provincial Dental Board. He also delivered lectures for some years at the Provincial Normal School at Truro.

He was an enthusiastic fisherman and also a crack marksman, and on various occasions, had been selected to shoot with teams at Ottawa.

Curling was another of his activities and this year he was made an honorary member of the Truro Curling Club.

During the First World War he was paymaster of the 193rd Battalion.

He was a valued member of St. Andrews United Church and was also active in Masonry.

Dr. MacArthur is survived by his widow, one son, two brothers and two sisters.

Alex McCarter of Victoria, B.C., aged 70, died on February 4. He had practised in Victoria since 1914.

Dr. McCarter is survived by his widow and two brothers.

Le Journal

DE L'ASSOCIATION DENTAIRE CANADIENNE

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PREVENTION DES MALOCCLUSIONS*

(suite et fin)

par LOUIS LEPINE, B.A., D.D.S., Orthodontiste, Montréal

En résumé, l'emploi de l'appareil de maintien est soumis à quatre grands principes:

- 1) Il ne doit pas être inséré sur une permanente en voie d'éruption ou sur une temporaire en voie de tomber.
- 2) Ne pas fixer l'appareil sur deux dents, car son immobilisation nuirait à la croissance.
- 3) Il ne doit pas être amovible, il pourrait être avalé.
- 4) Il ne doit pas être inséré, si la permanente remplace doit sortir sous peu dans l'espace.
- 5) Eviter à tout prix, surtout, l'extraction des secondes molaires temporaires. Si on doit le faire, maintenons l'espace sans contredit.

Rétention prolongée des temporaires

La chute tardive des temporaires est aussi une cause de malocclusion. Il faut les extraire, dès qu'on s'en aperçoit, pour faire de la prévention. La force biologique d'éruption est très faible, le moindre obstacle l'annule. Le déplacement occlusal dans la marche d'éruption est arrêté. La croissance à l'apex de la permanente se poursuit quand même, ce qui, au dire de certains, cause une sorte d'ankylose de la permanente en voie de formation. Cette ankylose serait due au fait probable que la dentine vient en contact

avec le tissu osseux avant la formation du ciment. Alors, que l'obstacle soit enlevé par l'extraction de la temporaire, la permanente ankylosée n'en fera pas moins son éruption quelques années en retard. La rétention prolongée des temporaires ne produit pas toujours cette ankylose, mais on en rencontre souvent des exemples, surtout lorsque c'est la canine qui est maintenue trop longtemps. La raison probable c'est que les canines temporaires se carient assez rarement, nous dit Higley, qu'elles sont les dernières dents temporaires à tomber, ou bien encore, parce qu'elles sont souvent, pour cela, prises entre une latérale et une prémolaire permanentes qui les retiennent solidement en place.

Lorsqu'une temporaire demeure en place trop longtemps, sa période de chute étant passée, la permanente remplace peut aussi sortir, mais labialement, ou lingualement, ou en rotation, ce qui est également une irrégularité dentaire à prévenir. Son extraction ne doit pas tarder. La radiographie encore ici est un moyen sûr de le constater. La radiographie chez l'enfant n'est pas chose impraticable; la pince-hémostatique pour tenir le film junior, fait expressément pour les enfants, nous permet de prendre une radiographie convenable chez les jeunes.

On a recours à la radiographie pour vérifier ou faciliter un diagnostic chez

*Voir livraisons de janvier et février, 1948.

les adultes, pourquoi ne pas s'en servir chez les enfants avec autant de besoin et autant de résultats? C'est un moyen indispensable à la pratique de la prévention, nous l'avons prouvé souvent plus haut.

Extraction de permanentes

L'extraction des dents permanentes est aussi une cause fréquente de malocclusion. En faisant l'extraction d'une permanente il faut garder en mémoire convenable chez les jeunes.

les principes de prévention tout autant qu'en faisant l'extraction d'une temporaire. Si l'extraction prématurée d'une temporaire, qui n'est pas par la suite remplacée par un appareil de maintien, est une cause de malocclusion chez les permanentes qui suivent, de même l'extraction d'une permanente sans restauration subséquente cause une malocclusion. Les dents voisines avancent dans l'espace en s'inclinant, l'occlusion en est influencée et devient anormale. Comme mesure préventive, on doit toujours remplacer une permanente extraite, par un pont, ou un partiel, suivant le cas.

On discute beaucoup de l'avantage de l'extraction des molaires de six ans, mais il n'est pas encore prouvé que cette théorie apporte des résultats attendus. Le plus souvent c'est le contraire, qui se produit, c'est-à-dire, qu'on cause une malocclusion par l'occlusion fermée qui en résulte. Nous avons dit plus haut qu'il y a un plan d'occlusion établi dès la fin de la première dentition qui se maintient ainsi jusqu'à l'éruption de la molaire de six ans. Cette première dent permanente arrive juste pour supporter et maintenir l'occlusion durant la transition de la dentition temporaire à la dentition permanente. Une fois cette dernière complétée, la molaire de 12 ans arrive pour renforcer et maintenir l'occlusion en permanence. Alors puisque ce sont là des stades importants dans le développement de l'occlusion, à plus forte raison faut-il sauver les molaires de six ans et de douze ans. On les néglige beaucoup, surtout celles de six ans. Combien d'enfants perdent ces dents à peine un an après leur éruption. La malocclusion ré-

sultant de la perte de ces dents se manifeste par la migration antérieure et inclinée des molaires de douze ans, un arrêt dans la croissance verticale des arcades, marqué par une occlusion fermée

Vous avez souvent lu dans les revues dentaires que la tendance en orthodontie se porte vers l'extraction comme aide thérapeutique. A ce sujet, Salzman prévient la praticien de ne pas adopter l'extraction comme seule méthode d'élimination de malocclusions sans l'aide de l'intervention orthodontique. Dans les cas qui ont montré une occlusion améliorée après l'extraction, telle amélioration est purement accidentelle. Il va même jusqu'à dire que, pour le dentiste, extraire des dents saines et renvoyer le patient dans l'espoir que les autres dents trouveront une place favorable sans l'aide du traitement ou de la surveillance de l'orthodontiste peut facilement être considéré comme une acte répréhensible. Ainsi parle une autorité en la matière, dans un des derniers numéros de la Revue d'orthodontie américaine. Il est bon de faire mention de cela parce que c'est une pratique assez en usage.

Fractures de dents.

Il serait peut-être bon de parler ici de la fracture d'une dent antérieure, parce que la sauver c'est faire de la prévention. Les fractures de dents antérieures sont fréquentes chez les enfants, comme vous le savez. Il faut réparer une dent aussitôt qu'il est possible de le faire après la fracture. La perte d'une dent antérieure chez un garçon ou une fillette, qui a des dents assez droites, ne peut se mesurer en dollars ou en sous. Il faut réparer autant que possible une centrale fracturée et la réparer du mieux possible. Si elle doit être extraite, il faut alors maintenir l'espace à l'aide d'un appareil de maintien. Il y a plusieurs sortes de fractures de dents antérieures, nous n'en discuterons pas. Si la radiographie révèle une fracture de la racine de la dent antérieure, le Docteur Kronfeld nous donne quatre conditions de fusion possible de cette racine: 1) les fragments doivent être en position d'adaptation, 2) ils doivent être immobilisés dans cette position

en immobilisant la couronne, 3) il ne doit pas y avoir d'infection, 4) la santé du patient doit être telle qu'elle ne nuise pas au processus de réparation et de régénération.

Quant aux fractures des temporaires, on doit s'y intéresser comme à celles des permanentes, surtout si elles doivent rester en place encore quelque temps avant de tomber. Les exigences de la santé, l'esthétique et l'efficacité de la mastication d'une permanente ou d'une temporaire exigent une attention sérieuse et une intervention adéquate dans le cas de fracture. Si on n'y veille pas à temps, il peut s'ensuivre une infection périapicale et la destruction osseuse qui l'accompagne, avec ses résultats de malocclusion que l'on connaît. Les fractures de la couronne avec ou sans pulpe exposée se traitent. Ce n'est pas de mon domaine de vous en parler en détails. D'autres plus capables peuvent en traiter longuement. C'est du devoir du dentiste de s'en occuper en en faisant comprendre le besoin aux parents.

Méthode de MacGregor.

Vous rencontrez souvent chez les enfants une centrale supérieure en occlusion linguale aux incisives inférieures, communément appelée dent barrée. Comme dernier moyen de prévention, en voici un, effectif et facile d'emploi, pour ramener cette centrale labialement en position normale d'occlusion. Cette dent peut se passer en avant en une journée ou même une demi-heure sans anesthésie. C'est le truc de la serviette; il vient du Docteur MacGregor, qui l'a employé depuis vingt ans. D'abord, il faut l'entière coopération des parents et que l'enfant ait de sept à onze ans. Il s'agit de pousser sur la dent en occlusion linguale avec le doigt d'une main, en même temps qu'on tire la serviette de l'autre. On fait une pression assez forte pendant deux ou trois minutes, repos d'une minute environ; on reprend, et ainsi de suite durant un bon quart d'heure ou une demi-heure. On donne instruction à la mère ou au père qui doivent être présents, de procéder de la

même façon à la maison. La mère emploiera ce procédé pendant une demi-heure, repos d'un quart d'heure, et elle recommence ainsi jusqu'à ce que la dent soit passée en avant des inférieures.

Une fois arrivée à ce point on demande à l'enfant de tenir les dents fermées, quitte à mettre un bandeau sur la tête pour la nuit, mais ce n'est pas toujours nécessaire. Le lendemain, reprendre le procédé si la dent est revenue à sa place primitive, et cela prendra peut-être une ou deux séances d'une demi-heure pour que la dent revienne en bonne place. Je l'ai moi-même fait dans le cas d'un enfant de neuf ans. Au bureau, après deux quarts d'heure séparés par un repos, la dent était bout à bout avec les inférieures. La mère a continué à la maison. Et là au bout de cinq quarts d'heure espacés, la dent était passée en avant. L'enfant n'a pas dormi avec un bandeau. Le lendemain il a suffi de trois quarts d'heure pour la ramener en place. Elle y est restée. La patiente est revenue au bureau le jour suivant et la dent était demeurée dans sa nouvelle position à la grande joie des parents. Vous pouvez être assurés que vous ferez un grand plaisir aux parents et qu'on vous considérera énormément, parce que ce sont des cas qui défigurent beaucoup et qui peuvent vite causer une déviation du segment antérieur du maxillaire inférieur. Ce sont deux points qui nuisent à l'esthétique faciale et dentaire de l'enfant, ce qui inquiète les parents. C'est le dernier moyen préventif de malocclusion mais ce n'est pas le moindre, parce que je sais que si vous l'employez avec succès, vous en serez satisfaits et les parents des enfants vous en seront des plus reconnaissants.

En résumé, prenons l'habitude de pratiquer la prévention dans notre pratique de tous les jours; nous n'en retirerons que des avantages. Servons-nous de la radiographie chez l'enfant, elle nous révélera ce qui se passe à l'intérieur de ses petits maxillaires, petits de taille mais grand d'activité. On peut pratiquer la prévention en obturant les temporaires au lieu de les extraire, en employant un

appareil de maintien lorsque l'on a jugé que c'est nécessaire, en éliminant les habitudes dentaires dès qu'on les découvre, en réparant les antérieures fracturées, en ne laissant pas d'espace libre après l'extraction des permanentes, en faisant l'ablation du frein lorsque c'est indiqué, etc. Ainsi nous aiderons le processus normal de croissance, nous préviendrons les malocclusions si nombreuses. Nous maintiendrons l'occlusion à son état normal. Salzman nous le dit lui-même: "Le maintien de l'occlusion normale comprend l'obturation appropriée, l'extraction, en temps et lieu, des dents temporaires, l'emploi de l'appareil de maintien pour les temporaires et la restauration pour les permanentes, l'élimination des habitudes dento-faciales et, en dernier lieu, la correction de la malocclusion présente".

614 Medical Arts Bldg., Montréal.

BIBLIOGRAPHIE

- Strang:—Textbook of Orthodontia, 1933.
 Spencer:—Prevention of Malocclusion, 1941.
 Brauer, Higley and Wood:—Dentistry for Children.
 Salzman:—Principles of Orthodontics, 1943.
 Developmental Pediatrics:—J. Ass. Dent. Can., 1947-315-5.
 Friel:—Migration of teeth following extraction—Am. J. of Orthodontics, 1946-166-3.
 Spencer:—Preventive Orthodontics, Am. J. of Orthodontics, 1946-265-5.
 MacGregor:—Space Maintainers, J. Ass. Dent. Can., 1947-63-2.
 Willett:—Interception of Malocclusion, Dental Digest, 1930-5.
 Hewatt:—Preventive Orthodontics, Oral Health, 1947-185-3.
 Shapiro:—Applied Anatomy of Head, 1943.
 MacGregor:—Interception of Malocclusion, J. Ass. Dent. Can., 1945-7.
 Adelstein:—Supernumary Teeth, Am. J. of Orth., 1943-654-11.
 Adelstein:—Space Maintainers, Am. J. of Orth., 1939-695-7.
 Cohen:—Space Maintainers, Am. J. of Ortho., 1941-398-8.
 Taylor:—Frenum Labium, Am. J. of Ortho., 1939-646-7.
 Johnson:—Habits and Malocclusions, J. Ass. Dent. Can., 1943-557-9.
 Carr:—Habits and Dental Anomalies, Am. J. of Ortho., 1945-152-3.
 de Montigny, Gérard:—Frein Anormal de la Lèvre Supérieure, Jour. Ass. Dent Can., 1943-239-5.

Dégâts causés par les broches à cheveux

A Colorado Springs, une jeune dame, en montrant ses incisives au docteur Walter Cogswell, disait: "Mes dents sont bien laides. Que peut causer ces coches dans mes dents antérieures?" — Non, elle n'avait pas l'habitude de tenir un crayon entre ses dents, ni aucun autre objet dur.

"Donnez-moi une de vos broches à cheveux", dit le dentiste. La patiente prit une de ses broches et la tendit au dentiste. "Remettez-la, maintenant." La jeune femme, sans y penser, place sa broche dans sa bouche, l'ouvre avec ses dents et la replace dans ses cheveux. Comme Archimède dans son bain, le docteur Cogswell sentit le frisson de la découverte importante le parcourir. Il courut dans les cabinets voisins, où travaillaient son père et deux de ses frères (dentistes aussi) pour leur annoncer qu'il venait de trouver la solution d'un problème, qui agaçait les dentistes américains depuis des années: Quelle est la cause de ces brèches, qui apparaissent sur les incisives des dents des femmes des Etats-Unis? Pour vérifier la théorie des épingles à cheveux (bobby-pin) de Walter, les Cogswell se mirent à examiner des centaines de sténographes, de garde-malades et de femmes mariées. Plusieurs d'entre elles, inconscientes de leur manie, niaient d'une façon indignée, l'habitude qu'elles avaient, d'ouvrir leurs épingles à cheveux avec leurs dents.

Mais l'expérience de Walter, plus souvent qu'autrement, prouvait qu'elles avaient cette mauvaise habitude. De plus, le docteur Cogswell constata que ces dents ébréchées se rencontrent le plus souvent chez les jeunes filles de 17 à 24 ans. A l'examen microscopique, ces épingles à cheveux apparaissent comme de petites scies, qui usent les dents. Les dentistes Cogswell ont compilé leurs expériences dans le Dental Digest du mois d'août et préconisent l'emploi d'un petit appareil pour protéger les dents: une petite palette de plastique (appelée "Bobopen"), qui s'adopte sur les dents et qui a une encoche spécialement faite pour ouvrir les broches à cheveux.

Dans le monde dentaire

Inscription des étudiants dentaires pour 1947-1948

Les tableaux suivants montrent des statistiques au sujet du nombre des élèves inscrits dans les facultés de Chirurgie-Dentaire des différentes universités du Canada, pour l'année académique courante. Il est à souligner que leur nombre est le plus élevé (922) jamais atteint dans l'histoire de nos archives. En tenant compte qu'une faculté (Toronto) n'a pas de classe régulière de finissants, cette année, on peut prévoir que le total des étudiants pour 1948-49 sera encore plus élevé. Le groupe des élèves finissants, à Toronto, cette année, est constitué par des diplômés d'autres universités, qui suivent le cours régulier. Le plan accéléré des études établi durant la guerre est responsable de l'absence d'élèves réguliers, chez les finissants. Toutes les facultés seront revenues au cours normal des études, l'an prochain, et les effets du plan accéléré de guerre seront finis.

L'automne prochain, on pourra recevoir 167 nouveaux élèves et deux écoles pourront peut-être augmenter leurs inscriptions, surtout pour accommoder les vétérans. (Tableau 2) Le nombre des diplômés, durant 1947, fut de 149 et comptait 5 femmes. A l'exception de l'année 1943, où, à cause de l'accélération des cours, il y eut deux graduations, dans certaines universités, ce nombre de diplômés est le plus considérable depuis la première grande guerre. En se basant sur les chiffres fournis par les facultés, ce nombre sera dépassé de beaucoup dans les années, qui suivront 1948. En 1948, il y aura moins de diplômés, à l'Université de Toronto, parce qu'il n'y a pas de classe de finissants, situation créée par les raisons énumérées plus haut.

Le nombre des femmes diplômées, sur ce continent, est très bas en comparaison du nombre des hommes. En 1947, il n'y eut que 5 femmes diplômées, ce qui représente une proportion de 3.5% du total; mais cette proportion est tout de même plus forte que la moyenne. Dans plusieurs pays européens, il y a autant de femmes que d'hommes dans les écoles dentaires. Le tableau No 5 donne la distribution des étudiants par provinces. La proportion du nombre d'étudiants de chaque province en rapport à la population est la suivante:

Ile-du-Prince-Edouard ...	1 par 10,000
Nouvelle-Ecosse	1 par 19,000
Nouveau-Brunswick	1 par 21,000
Québec	1 par 16,000
Ontario	1 par 13,000
Manitoba	1 par 22,000
Saskatchewan	1 par 10,800
Alberta	1 par 11,700
Colombie Britannique ...	1 par 20,000

Le nombre des étudiants, qui fréquentent des universités étrangères, est plutôt restreint, excepté peut-être en Colombie Britannique, et ce nombre ne peut être connu de façon définitive. Les chiffres cités plus haut ne donnent pas une idée exacte de la situation en Colombie Britannique, puisqu'un certain nombre d'étudiants de cette province sont aux études dans des écoles américaines.

Il est intéressant de comparer les proportions des étudiants avec le chiffre de la population de chaque province et les proportions des dentistes pratiquants avec cette même population. Par exemple, en Saskatchewan, le nombre des étudiants dentaires est assez élevé, tandis que le nombre des dentistes desservant la population est assez restreint.

TABLEAU No 1

Total des étudiants enrégistrés dans les facultés dentaires du Canada, au 2 janvier 1948.

Université	1 ^{ère} année	2 ^{ème} année	3 ^{ème} année	4 ^{ème} année	garçons	filles	total
Dalhousie	12	10	6	9	36	1	37
McGill	41	36	35	15	125	2	127
Montréal	60	64	43	41	205	3	208
Toronto	159	177	75	24	431	4	435
Alberta	25	51	22	17	113	2	115
Total	297	338	181	106	910	12	922

Comprenant 16 étudiants qui combinent leur première et deuxième années.

TABLEAU No 2

Nombre maximum d'étudiants, pouvant être reçus en première année, l'an prochain

Université de Dalhousie.....	12
Université McGill.....	20 (40—si vétérans)
Université de Montréal.....	50
Université de Toronto.....	60
Université d'Alberta.....	25 (30—si vétérans)
Total.....	167 (à 192)

TABLEAU No 3

Résumé des enrégistrement dans les facultés dentaires du Canada de 1939-1947 inclusivement.

Université	1939-1940	1940-1941	1941-1942	1942-1943	1943-1944	1944-1945	1945-1946	1946-1947	1947-1948
Dalhousie....	36	31	25	25	22	28	27	38	37
McGill.....	60	58	61	67	67	51	73	111	127
Montréal.....	90	104	118	139	154	162	184	188	208
Toronto.....	222	210	232	270	255	264	180	340	435
Alberta.....	56	51	49	53	24	34	54	108	115
Total.....	464	454	485	554	522	539	518	785	922

TABLEAU No 4

Nombre total des diplômés durant 1939-1947 incl.

Université	1939	1940	1941	1942	1943	1944	1945	1946	1947
Dalhousie....	15	12	7	8	11	6	8	0	10
McGill.....	17	13	18	9	26	12	13	5	18
Montréal.....	16	23	14	31	18	37	30	41	36
Toronto.....	49	56	45	40	103	61	58	46	75
Alberta.....	18	13	13	32	8	24	7	0	10
Total.....	115	117	97	120	166	140	116	102	149

Pour l'année 1947

	Hommes	Femmes
Dalhousie.....	10	0
McGill.....	17	1
Montréal.....	36	0
Toronto.....	71	4
Alberta.....	10	0
Total.....	144	5

TABLEAU No 5

Distribution des étudiants réguliers par province et pays étrangers, dans les facultés dentaires du Canada, au 2 janvier 1948.

Université	Ile-du-Prince-Edouard	Nouvelle-Ecosse	Nouveau-Brunswick	Québec	Ontario	Manitoba	Saskatchewan	Alberta	Colombie Britannique	Etats-Unis	Possessions britanniques	Terre-Neuve	Danemark	Haiti	France	Pologne	Australie	Angleterre	Afrique du Sud	Chine	Nouvelle-Zélande	Total
Dalhousie . . .	5	19	9	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	37
McGill	3	7	7	54	11	6	2	3	12	5	3	0	0	0	0	0	0	0	0	0	0	127
Montréal . . .	1	4	6	177	4	2	3	0	0	0	0	1	1	1	0	0	0	0	0	0	0	208
Toronto	0	2	1	1	317	19	31	9	25	2	0	0	0	0	0	19	4	2	2	1	435	
Alberta	0	0	0	0	1	7	35	57	15	0	0	0	0	0	0	0	0	0	0	0	0	115
Total	9	32	23	232	333	34	78	70	52	14	3	4	1	1	1	2	19	4	2	2	1	922

TABLEAU N° 6
Etudiants additionnels.

	Dalhousie	McGill	Montréal	Toronto	Alberta	Total
Gradués durant 1947.....	0	0	5	12	2	19
Post-gradués durant 1947..	0	0	50	95	0	153
Infirmières dentaires.....	0	0	0	25	8 occasionnels 0	25

L'expression "gradués" veut dire des dentistes, qui suivent des cours pour l'obtention d'un diplôme.

L'expression "post-gradués" veut dire des dentistes qui suivent des cours ne donnant droit à aucun diplôme.

Réunion du Comité Exécutif de l'A.D.C.

Le Comité Exécutif du Bureau des Gouverneurs de l'A.D.C. s'est réuni à Toronto, les 1er et 2 mars 1948. En plus de régler des affaires de routine, les membres ont élaboré un bilan financier d'essai pour 1948, qui sera présenté, après amendements, à la réunion annuelle, au mois de juin.

Tous les présidents de comités sont priés de soumettre leurs estimés pour l'année courante au secrétaire, le plus tôt possible; on leur demande aussi de faire part des modifications ou des affaires nouvelles, qui ont trait à leurs comités respectifs.

Réservation pour la réunion du Bureau des Gouverneurs

Tous les membres, qui projettent d'assister à la réunion du Bureau des Gouverneurs, à la Malbaie, sont priés de retenir leur chambre, tout de suite, chez le Dr Gustave Ratté, 140 rue S.-Jean, Québec. Un autre congrès sera en cours au Manoir Richelieu, en même temps, et le nombre des chambres est limité.

Les présidents de comités, qui ont un rapport à présenter, doivent s'assurer d'être présents, dès le début de la réunion.

Projet d'assurance-santé à la session fédérale

On vient de publier qu'un bill d'assurance-santé sera présenté à la Chambre des Communes durant la présente session. Cette nouvelle apprend que ce projet de loi est en train d'être rédigé, sans qu'on

ait, au préalable, consulté les représentants des corps professionnels intéressés.

On déclare que cette loi est une copie des propositions déjà présentées, c'est-à-dire, qu'elle est divisée en sept ou huit chapitres, avec coûts séparés, de façon à ce que les provinces puissent les accepter en bloc ou en partie. Le financement de ce plan est divisé entre le Dominion et les Provinces, probablement sur une base de 40-60, en confiant aux provinces la tâche de percevoir les cotisations des adhérents.

A l'étude de ce plan, il est probable que certaines provinces adhéreront à cette loi, tandis que d'autres le rejeteront dans son entièreté, pour le moment, du moins. Toutefois, une conférence plénière du gouvernement fédéral et des gouvernements provinciaux devra, peut-être, être convoquée avant de mettre cette loi en pratique.

On annonce aussi l'introduction d'un projet de loi concernant la pension de vieillesse. Ce plan comporterait l'obligation pour tous les citoyens à faire partie de cette organisation, moyennant une retenue de 5% sur leur revenu, jusqu'à un certain âge. Cette situation, au sujet de ces deux projets de loi sociaux, ressemble à celle, qui existait, en 1944, quand les bills d'assurance-santé et celui des allocations familiales ont été présentés à la même session, pour voir ensuite le bill d'assurance-santé retiré pour faire place à celui des allocations familiales, à la toute dernière heure de la session. Il s'agit peut-être d'une manœuvre politique, ayant comme but de faire amorcer une discussion, en Chambre, pour ensuite aller devant le peuple, dans une élection générale, sur cette question.

Volume demandé aux quartiers-généraux de l'A.D.C.

Le secrétaire de l'Association aurait un besoin urgent du Bulletin No 9, publié par la Carnegie Foundation, intitulé: "Dental Education in the United States and Canada". Si un membre pouvait en disposer, il pourrait l'expédier à: Dr. Don W. Gullett, 211 rue Huron, Toronto.

Réunions des différents comités

Les comités de l'A.D.C. se sont réunis ou se réuniront aux dates suivantes:

janvier 24—Comité des Services Dentaires, à Ottawa.

janvier 31—Comité du Programme, à Québec.

février 5—Comité d'Assurance-Groupe à Toronto.

avril 5 et 6—Comité d'Education Dentaire, à Montréal.

avril 6 au 14—Visite du Président aux Sociétés Dentaires de l'Est du Canada.

juin 17 au 21—Assemblée annuelle du Bureau des Gouverneurs, à la Malbaie.

juin 21 au 24—Congrès National, à la Malbaie.

Nécrologie

À Québec, à la fin de janvier, est décédé, à l'âge de 31 ans, le docteur Jean Lapointe, qui pratiquait, depuis peu, dans cette ville.

Le docteur Lapointe avait fini ses études dentaires à l'Université de Montréal, en 1945, avait fait un bref séjour dans l'armée et avait ouvert son cabinet, à Québec, à la fin de la guerre.

Nos condoléances à sa famille.

"Les professions sont nées d'un besoin social et il vous incombe de répondre au besoin social, qui les a fait naître. Non seulement, vous devez être des dentistes et des médecins, mais votre culture universitaire, qui a suivi votre culture classique, fait de vous des hommes parfaits de la société. Lorsqu'on sort d'une école de haut savoir, avec des diplômes du culture spéciale, on est placé au sommet de l'échelle sociale et il est défendu d'en descendre.

"Soyez pour la société des guides, des éclaireurs, des chefs. La culture, que vous avez acquise, vous donne des devoirs, vous crée des obligations. Vous devez être des apôtres de la société. On demande à l'ouvrier d'être apôtre et à plus forte raison, ceux qui ont obtenu une culture plus avancée se doivent d'être apôtres. L'ouvrier ne peut apporter à la société malade les solutions, que seuls ceux, qui ont une culture élevée, se doivent de donner."

Mgr Georges Léon Pelletier, évêque des Trois-Rivières, au cours d'une allocution prononcée lors de la célébration du vingt-cinquième anniversaire de fondation de la Société Dentaire des Trois-Rivières, le 29 novembre 1947.

Bibliothèque de l'Université de Montréal

La bibliothèque de la faculté de Chirurgie Dentaire de l'Université de Montréal vient d'être réorganisée et recevra avec reconnaissance toutes les revues et tous les volumes traitant de dentisterie, que les dentistes consentiront à lui offrir.

Des collections complètes de toutes les revues dentaires du monde sont à être amassées et d'ici peu de temps, cette bibliothèque constituera une source de documentation des plus précieuses.

Les envois peuvent être adressés au Bibliothécaire, Faculté de Chirurgie Dentaire, Université de Montréal, 2900 Boul. Mont-Royal, Montréal. Un commissionnaire pourra recueillir, à domicile, ces publications.



PAGES EDITORIALES

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PAUL GEOFFRION, B.A., D.D.S., A.I.D.O., F.I.C.D., L.C.D. ARMAND FORTIER, D.D.S., L.C.D.

Rédacteur:

GERARD DE MONTIGNY, B.A., D.D.S., M.Sc.D., L.C.D.
397 est Boul. S.-Joseph, Montréal

Le rôle hospitalier du dentiste

Plusieurs enquêtes menées dans les grands centres hospitaliers du Canada et des Etats-Unis, ces dernières années, ont établi l'importance des services dentaires dans le traitement des malades. Des organismes, comme l'American Hospital Association, en face des systèmes différents institués dans les hôpitaux et en considération de la nécessité de procurer aux patients l'assistance thérapeutique du dentiste, ont élaboré un plan-type de service de chirurgie dentaire susceptible d'être adopté en tout ou en partie, par tout hôpital général.

Avec les perfectionnements modernes de la radiographie et les recherches conduites sur l'influence des infections buccales sur l'état général de tout individu, le dentiste est devenu un collaborateur précieux du médecin dans le dépistage et l'élimination des foyers infectieux de nature à influencer tout l'organisme du patient. Depuis 1910, année pendant laquelle un grand médecin anglais, le Dr Hunter, dénonçait les ravages causés par des dents malades sur l'état général du patient et depuis que Rosenow, de la clinique Mayo, de Rochester, a établi, par des travaux de recherches élaborées, —et d'une façon catégorique—les rapports étroits qui existent entre les dents et les amygdales avec les autres tissus du corps humain, le travail du dentiste a changé de caractère. De technique et de mécanique qu'elle était, en grande partie, la besogne du dentiste s'est alliée plus profondément à celle du médecin; la formation de l'étudiant-dentiste s'est avérée plus scientifique, plus remplie d'étude des sciences de base (anatomie, physiologie, histologie, anatomie pathologique, bactériologie, chimie, etc. . .) et plus incorporée dans la profession thérapeutiste, au service de l'humanité souffrante.

Ces maladies causées par des dents avariées peuvent être de différentes espèces; les plus connues sont celles qu'on range dans la catégorie des arthrites et elles peuvent se manifester sous la forme de rhumatismes, de névrites, etc. . . enfin d'une kyrielle d'affections d'étiologie obscure et de syndrômes douloureux. Les dents ont des relations reconnues avec d'autres systèmes comme le système digestif et oculaire, rapports qui ont été étudiés à fond dans des manuels et des articles scientifiques de médecine.

Les dents et leurs tissus adjacents peuvent aussi déterminer des maladies névralgiques dans les autres parties de l'économie, manifestations qu'il nous est possible de constater, tous les jours.

Le dentiste ne fait pas que diagnostiquer des lésions susceptibles de favoriser des perturbations au sein de l'économie générale, il est en mesure aussi de déceler des maladies d'ordre général qui ont des manifestations sur les dents ou dans les tissus de la cavité buccale. Ainsi, par exemple, le chirurgien-dentiste peut remarquer dans les gencives des signes, qui trahissent des dérangements sanguins, comme des empoisonnements dus à des substances toxiques telles que le plomb ou le mercure; il est capable d'identifier, à son tout début, un néoplasme ou un cancer de la bouche et mettre aussi son patient sur la piste d'une guérison probable.

Des désordres de nature nutritive ou glandulaire apparaissent souvent dans la bouche et sur les dents et le dentiste est placé dans une position d'avant-garde pour avertir son patient et le diriger vers son médecin.

Il y a une quantité de ces maladies organiques, qui ont leur répercussion dans la bouche comme il y a une légion d'affections dentaires, qui peuvent avoir un effet pathologique dans des régions souvent éloignées de ce milieu initial.

Le cadre de cette communication ne nous permet pas de développer ce sujet. Par cet exposé, nous désirons seulement mettre en évidence le rôle thérapeutique et diagnostique du dentiste dans un centre hospitalier. Cette fonction, à elle seule, justifie et commande la présence d'un dentiste au sein d'un personnel d'hôpital. Et tous connaissent cet autre aspect technique de l'occupation du dentiste, nous voulons dire son travail restaurateur, (obturations, ponts, dentiers, etc. . .). Il est cependant des notions que tous ne semblent pas connaître, ou s'il les connaissent, tous ne semblent pas considérer assez leur application pratique. Nous voulons parler des notions d'hygiène dentaire. Il est un fait incontesté, qu'une hygiène défectueuse de la bouche nuit à la mastication convenable des aliments, détermine une digestion laborieuse et gêne l'assimilation de la nourriture ingérée. Il nous semble que des malades en repos, qui veulent augmenter leur résistance en face d'une infection sournoise, qui veulent tirer le maximum de profit de l'alimentation, qui leur est offerte, devraient avoir à coeur de maintenir leur appareil masticatoire dans le meilleur état possible. Malheureusement, un grand nombre de malades n'attachent pas l'importance qu'il faudrait à cet aspect de leur traitement. Des dents cariées, souvent atteintes d'infection,

peuvent aggraver la condition d'un organisme, qui a toutes les peines du monde à combattre une lésion pulmonaire ou autre.

Un grand nombre d'autres raisons doivent inciter chacun de nous à prendre soin de nos dents; il serait trop long de toutes les énumérer, mais nous pouvons en nommer une: l'esthétique. De nos jours, on met tout en oeuvre pour soigner son apparence extérieure. Souvent les dents sont négligées dans cette toilette bien légitime; et pourtant, de belles dents propres jouent un grand rôle dans la beauté et la symétrie de la figure. Plusieurs semblent l'oublier.

Le seul facteur en cause à notre avis, est un complexe de négligence, d'apathie et de peur de l'effort.

GERARD DE MONTIGNY.

Doctorat "Honoris Causa" décerné par l'Université de Montréal



Un doctorat "Honoris Causa" en Chirurgie Dentaire a été décerné, le 26 janvier 1947 au docteur Philip E. Blackerby, dentiste et membre du Comité de Direction de la Kellogg Foundation.

Dans la photographie, prise à cette occasion, on remarque, de g. à d.: le docteur Gustave Gauthier, secrétaire de la Faculté de Chirurgie Dentaire de l'U. de M., M. Edouard Montpetit, secrétaire général de l'U. de M., le docteur L. M. Waugh, de New York, le docteur Blackerby, M. l'Honorable Alphonse Raymond, président de la Commission d'Administration de l'U. de M., Mgr Olivier Maurault, recteur de l'U. de M., M. l'Honorable Phillippe Brais, vice-président de la Commission d'Administration de l'U. de M., le docteur Jos. E. Johnson, de Louisville, Kentucky, le chanoine Georges Deniger, vice-recteur de l'U. de M., le docteur Ernest Charron, doyen de la Faculté de Chirurgie Dentaire de l'U. de M.

Discours prononcé à la séance inaugurale du dixième Congrès dentaire international

tenu à Boston, 4-8 août 1947

par M. A. E. ROWLETT, président de la Fédération Dentaire Internationale

Mesdames, Messieurs,

NOUS avons eu, ce matin, la toute particulière bonne fortune d'être favorisés de souhaits de bienvenue de la part de Son Excellence le Gouverneur de l'Etat de Massachusetts, et de Son Honneur le Maire de la Ville de Boston en personne.

Leurs présences à la cérémonie d'ouverture du Xième Congrès Dentaire International, confère une dignité toute spéciale à cette manifestation et du poids à nos délibérations.

Ce fut pour nous un motif de satisfaction et d'encouragement de constater que tous deux reconnaissent l'importance de l'art dentaire, comme une partie intégrante du service sanitaire de la communauté.

Son Honneur, Monsieur le Maire, m'a offert cette magnifique clef, comme un symbole nous donnant l'accès des portes de cette Cité. En votre nom, je le remercie pour ce geste généreux et je lui affirme notre intention de consacrer à la visite à cette ville, si belle par ses sites et son histoire, tout le temps que nous accorderont les travaux du Congrès.

Chaque Congrès Dentaire International confère au Président de la F.D.I. le devoir de présenter un rapport sur les activités de la Fédération depuis le dernier congrès international. Il lui confère également l'honneur d'ouvrir le congrès et d'installer son Président.

Il en est certainement parmi vous, qui se sont demandés ou qui ont peut-être demandé à leur voisin, ce qu'est la F.D.I., quelles sont ses activités dans le cadre professionnel de l'art dentaire, ce qu'ils représentent pour elle et dans une acceptation plus large, quel est le rôle qui lui incombe dans l'oeuvre de reconstruction d'un monde éprouvé par la guerre? La réponse aux trois premières questions

n'offre aucune difficulté particulière. Il n'y a que des faits à constater.

La F.D.I. est une association permanente ou si vous préférez, une union universelle des sociétés dentaires nationales et des groupements qui leur sont affiliés. Ses buts consistent, tout d'abord, à organiser des congrès dentaires internationaux à intervalle régulier de cinq ans, ensuite, à maintenir et renforcer les sentiments de confraternité entre sociétés nationales, d'encourager de façon générale l'activité des organisations, dont le but est de contribuer au progrès de la science dentaire, notamment par attributions du prix Miller et d'autres fondations internationales. Enfin, de réunir et conserver les documents professionnels et d'organiser dans un esprit international des centres documentaires régionaux.

Elle défend la thèse d'une autonomie dans l'éducation et l'organisation de la pratique dentaire; autonomie, qui ne comporte en aucune manière, d'opposition avec la médecine et qui, au contraire, se propose la coopération la plus étroite avec elle, en tout ce qui se préoccupe de recherche scientifique et clinique, d'éducation et du service sanitaire.

La réponse à la quatrième question, qui est cependant la plus importante de toutes, ne peut être aussi catégorique. Nos espoirs en cette matière sont traduits dans le rapport sur les activités de la F.D.I., que je vais avoir le plaisir de vous présenter ce matin.

Le point de savoir, si de tels espoirs sont justifiés et raisonnables, est une question d'opinion personnelle. Nous vous placerons devant l'évidence de faits, vous serez les juges.

Histoire de la F.D.I.

L'organisation de la F.D.I. est unique en son genre. Les rapports sur ses acti-

vités au cours des onze dernières années peuvent être comparés aux chapitres finaux d'un roman à épisode, qui pour être bien compris, exige quelque connaissance de ce qui s'est passé dans les chapitres précédents. Ce sera là mon excuse, si je suis obligé de retracer à votre intention un court résumé de l'histoire et de la structure générale de la Fédération.

La Fédération Dentaire Internationale fut fondée en 1900 à Paris, au cours du troisième Congrès Dentaire International à l'initiative de Charles Godon. Auparavant, deux Congrès Dentaires Internationaux avaient été tenus à l'occasion de grandes expositions internationales, à savoir à Paris en 1889 et à St-Louis en 1893. C'était à nouveau une exposition universelle qui avait permis l'organisation à Paris d'un congrès, au cours duquel la Fédération allait être créée.

Ces congrès, et particulièrement le troisième, avaient eu le plus grand succès mais la situation internationale de la Dentisterie ne donnait pas toute possibilité aux congrès nationaux d'organiser de telles manifestations.

La profession dentaire était relativement jeune, elle se développait rapidement. Les délégués nationaux étaient pour la plupart des jeunes gens énergiques, pleins d'enthousiasme et qui avaient déjà eu l'occasion de contracter des liens d'amitié avec d'autres confrères au cours des congrès précédents.

Charles Godon était le conducteur-né et comme tout conducteur-né, un idéaliste pratique, c'est-à-dire, tout à l'opposé du visionnaire dépourvu de sens pratique. Par idéaliste nous entendons un homme, qui s'est donné un but qu'il considère comme pouvant être atteint, aussi bien dans le domaine privé que public, alors que d'autres hommes, sans aucun doute, même aussi capables et aussi compétents, ne partagent pas cette conviction.

L'idéalisme comporte une forme d'altruisme. Le réaliste, de son côté, proclame, que le moteur de l'humanité est l'intérêt égoïste. Mais quelque vraie que puisse être cette thèse, en fait, au point de vue biologique aussi bien chez l'homme que chez l'animal, l'expérience prouve qu'elle ne se confirme point pour

la majorité, dont la conception est un mélange d'intérêts égoïstes tempérés par de l'altruisme en proportion variable.

Godon s'était parfaitement rendu compte de ce qu'il y avait de potentiel énergétique et de progrès dans les congrès internationaux, plus particulièrement en Odontologie.

La première préoccupation qui inspira la création de la Fédération, fut la nécessité de posséder un organisme international permanent chargé de promouvoir et d'organiser les congrès internationaux.

L'initiative de Godon fut adoptée avec enthousiasme par les 1,200 dentistes présents à Paris et qui étaient délégués par les principales sociétés dentaires des pays, qui avaient participé au Congrès. Et c'est ainsi qu'est née à Paris le 14 août 1900 la F.D.I.

La première réalisation fut la constitution de notre Conseil Exécutif, chargé de se réunir une fois par année et d'assurer l'organisation du Congrès suivant.

Mais déjà au cours de la première session, le champ d'action fut étendu. On constata, en effet, que la majorité des membres du Conseil était tout particulièrement intéressée tout d'abord, par le problème de l'éducation professionnelle ensuite par le souci de prêter assistance à ceux qui souffrent et qui manquent des ressources nécessaires pour obtenir le soulagement de leur mal.

C'est pourquoi les deux premières commissions de la F.D.I. furent les commissions d'éducation et d'hygiène publique. Cette dernière devint plus tard la Commission du service dentaire public.

C'est une fait tout particulièrement significatif et qui explique dans une certaine mesure l'extraordinaire vitalité de la F.D.I., de constater que ce leit-motiv de l'éducation et de l'organisation des soins dentaires pour les nécessiteux, s'est conservé tout au long de l'activité de la F.D.I. jusqu'à présent.

Chaque session de la F.D.I. et chaque discours présidentiel au cours des quarante-sept années d'existence de la Fédération a été imprégné du même esprit d'idéalisme pratique.

En préparant ce discours, je n'ai pas

été étonné, de découvrir que la F.D.I. est, pour autant que mon information soit exacte, le seule organisation sanitaire internationale qui, en dehors de la Croix-Rouge de Genève, ait résisté inébranlablement aux effets de désintégration de deux guerres mondiales. Aucune autre profession ne peut se prévaloir d'une telle organisation. Bref, il semble bien que la Fédération de la F.D.I. ait, dans sa sphère spéciale, atteint le but pour lequel l'U.N.O. lutte actuellement si énergiquement, ce même but que d'ailleurs la Ligue des Nations n'a pas atteint.

Quel est le secret de ces succès et par quoi la F.D.I. a-t-elle réussi là où d'autres ont échoué?

Il semble que la réponse est peut-être, qu'il existe deux tendances qui doivent être satisfaites si nous désirons développer cette activité harmonieuse qui conduit à la paix: l'instinct créateur et l'instinct altruiste ou tendance au dévouement de soi-même. Ce sont là les deux principaux facteurs qui guident l'humanité. Leur potentialité pour le bien comme pour le mal est sans limite. La connaissance et l'application de ces lois psychologiques sont les secrets d'un succès terrifiant d'un Hitler ou d'un Mussolini.

Mais en ravalant et avilissant ces notions, en les appliquant à des fins égoïstes et à une prédominance purement nationale, ces dictateurs ont laissé la moitié du monde dans la misère et la ruine.

Godon et ses collaborateurs en construisant sur la même fondation psychologique, mais dans le souci de développer une activité internationale harmonieuse, ont obtenu des résultats positifs.

Ces succès de la F.D.I. dans le passé dans le domaine de la paix créatrice, justifient notre espoir que les mêmes principes auront les mêmes résultats favorables dans l'avenir. A vous de juger si un tel espoir est raisonnable.

Quoiqu'il puisse en être, il reste ce fait indéniable c'est que l'idéal qui marque l'action de la F.D.I. a séduit les plus grandes figures de la Dentisterie et qu'il me soit permis de le répéter, la Fédération a, dans une mesure certes modeste, atteint le but que poursuit l'UNO et que

la Société des Nations a manqué dans de si tragiques circonstances.

Dès ses premières manifestations, la F.D.I. a travaillé avec une étonnante efficacité et surprenante régularité. Certes, il y eut de temps à autre des frictions, des différences d'opinion assez chaudement exprimées, mais les contacts personnels entre individus animés d'un même esprit, créaient entre eux des sentiments d'amitié, lesquels engendraient graduellement une confiance mutuelle, qui, à notre avis, est un indispensable facteur de collaboration internationale.

Commissions

Les commissions d'Education et d'Hygiène buccale publique furent organisées en 1901, à Cambridge, en Angleterre, et d'autres commissions suivirent.

Une commission de la Presse dentaire internationale fut créée à la session de la F.D.I. tenue à Madrid, et, en 1905, trois autres commissions s'ajoutèrent à la liste, à savoir:

une commission d'Histoire de la dentisterie.

une commission de la Jurisprudence et de déontologie internationale.

une commission des Services dentaires à l'armée et à la marine.

Comme le champ d'action des commissions s'étendait, leur nombre fut porté à onze.

On se rendit compte ensuite que ce nombre de commissions était exagéré et à l'occasion du Congrès de Vienne, leur nombre fut ramené à cinq, à savoir:

1. La commission d'Education et de Terminologie, comprenant une sous-commission de Terminologie.
2. La commission d'Hygiène buccale.
3. La commission de Recherches scientifiques et préparation du prochain Congrès.
4. La commission de Législation et de Documentation.
5. La commission du Service dentaire public.

Les titres de ces commissions suffisent pour marquer l'étendue du champ d'action de la Fédération.

D'autre part, les comptes-rendus des

différents congrès constituent le témoignage de leurs activités, et les noms d'un grand nombre de Praticiens distingués apparaissent sur les listes de membres des commissions, sur celle des Présidents de la Fédération, ainsi que celles des lauréats des prix Miller et Jessen prouvant jusqu'à quel point le programme et les principes de la Fédération avaient attiré la sympathie de ces confrères éminents.

Fondation Documentaire Dentaire

La Fondation Documentaire Dentaire, dont le siège est fixé à Bruxelles, a pour but de prêter son aide à la recherche scientifique, et elle a reçu le généreux appui matériel et moral de la Fédération.

La nécessité de développer ce service fut le thème du discours présidentiel du Dr Logan à Zurich en 1939, discours publié dans le bulletin de 1940.

La F.D.I. décerne trois prix internationaux: le prix Miller, que je vais avoir l'honneur de décerner ce matin; le prix Jesson pour services rendus dans le domaine de l'hygiène buccale et dont le dernier lauréat fut notre regretté confrère le Dr Harvey Burkhart de Rochester, qui fut l'inspirateur des fastueuses donations Georges Eastman; un troisième prix fut institué en mémoire de notre Président d'Honneur, Georges Villain. Ce prix est destiné plus spécialement à récompenser les travaux dans le domaine de l'Orthodontie et de la Prothèse et sera décerné pour la première fois au cours de cette session par le frère de Georges Villain, notre ami Henri Villain.

Les onze années, qui se sont écoulées entre le Congrès de Vienne et celui de Boston, peuvent être divisées en trois périodes, à savoir: deux périodes d'action, séparées par une période pendant laquelle la F.D.I. fut latente.

Période d'Action de la F.D.I., 1936-1939

Notre Président, le Dr Logan fut un grand "Leader" et Georges Villain, notre Président d'Honneur, fut une force.

Le Congrès de Vienne avait été triomphal et les cinq commissions se mirent au travail activement pour le Congrès de

1941, qui, à l'invitation de la British Dental Association, devait se tenir à Londres.

La diminution du nombre des Commissions ne réduisit en rien leur efficacité et une étroite collaboration fut notamment instituée entre les commissions d'Hygiène buccale, de Recherches scientifiques et du Service de Santé publique, qui tinrent une session commune.

Commission d'Hygiène Buccale

L'importance de cette commission est illustrée par la résolution prise à Zurich et au cours de laquelle le Professeur Toverud fut chargé de la préparation d'un rapport scientifique sur les principes de la Prophylaxie dentaire et para-dentaire (avant et après la naissance) et la publication de ce rapport dans les journaux de toutes les associations se préoccupant de la maternité et des oeuvres de l'enfance.

Commission des Services Dentaires Publics

Cette commission fut quelque peu paralysée dans son activité par le manque d'informations et de documentation concernant le service dentaire dans les différents pays représentés à la F.D.I.

Elle demanda au Conseil Exécutif de réclamer des pays affiliés les informations nécessaires, même s'ils n'avaient pas de représentation dans la commission.

Commission d'Education

Celle-ci reconnaissant l'évolution profonde, qui s'était manifestée dans le domaine de l'Education dentaire au cours des années précédentes, décida d'ajourner son rapport jusqu'à la session de 1940, dans le but de parfaire la préparation du programme idéal, qui devait être présenté au Congrès de Londres en 1941.

Commission de Terminologie

Cette commission fit rapport sur les recherches qu'elle effectua sur la Terminologie orthodontique.

Commission de Legislation et de Documentation Dentaire

Celle-ci approuva le plan d'expansion de la Fondation documentaire dentaire

proposé par le Dr Logan dans son discours présidentiel, et il fut suggéré la formation d'un comité ayant le Dr Logan comme président, dans le but d'obtenir toute aide nécessaire pour permettre la réalisation de ce plan.

La commission adopta également le projet de règlement présenté par le Dr Jaccard comme base d'un texte définitif.

La commission, enfin, émit le vœu de voir le Comité financier de la F.D.I. nanti de tous pouvoirs afin de lui permettre de prendre toute mesure d'urgence pour la sauvegarde des biens de la Fédération.

Journal Dentaire International

Au Congrès de Vienne il fut décidé de remplacer le bulletin par un journal dentaire international, et à la session de Zurich, grâce surtout à l'énergie inébranlable de Nord, il pouvait être considéré à tout point de vue comme un fait accompli. Ceci aurait donné à la F.D.I. des ressources financières suffisantes pour lui assurer une organisation matérielle saine, ce qui constituerait le développement logique et normal des conceptions présentées par Godon en 1900.

De même qu'un Congrès a surtout pour but de présenter une mise au point dans tous les domaines de la dentisterie effectuée par les praticiens les plus réputés, ainsi qu'une revue de toutes les importantes découvertes réalisées depuis le dernier congrès, de même le journal se donnait pour but de tenir les praticiens au courant des progrès de la dentisterie, cette section de notre profession étant confiée à un rédacteur spécialement qualifié par sa compétence. Malheureusement, la réalisation de ce projet fut anéantie par la déclaration de guerre et la F.D.I. entra dans une période de sommeil qui dura six longues années.

Période d'Inactivité Causé par la Guerre Mondiale No 2, 1939-1945

Pour la plus grande partie de cette période, les contacts furent entièrement rompus avec les pays occupés. D'autre part, la Suède et la Suisse furent en fait isolées.

Toutefois les communications furent maintenues, pendant toute la guerre, entre les deux Amériques et les pays du "Commonwealth" britannique. C'est ainsi que j'ai pu assister au meeting du centenaire à Baltimore en 1940, au meeting annuel de l'American Dental Association à Houston (Texas) en 1941 et au meeting d'Affaires à Chicago en 1943.

Au cours de chacun de ces voyages, j'ai rendu visite à nos confrères canadiens et en 1941 j'ai effectué le voyage de Québec à Vancouver, m'arrêtant dans les principales villes le long de l'itinéraire où j'ai été, là où elles existaient, reçu par les Sociétés d'Etat ou de Villes. Partout j'ai trouvé l'accueil le plus aimable et généreux.

Reprise d'Activité, 1945-1947

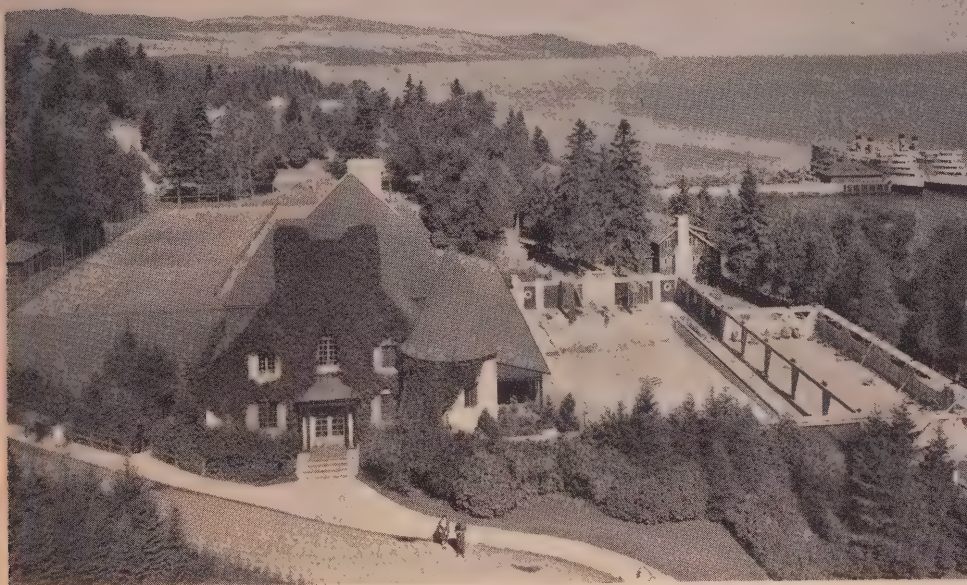
L'oeuvre de la F.D.I. s'était tellement identifiée avec la Dentisterie organisée, grâce à vingt années d'activité et les liens d'amitié contractés pendant cette période s'étaient noués de façon tellement solide, qu'en dépit de l'effet de désagrégation dont la seconde guerre menaçait la civilisation, nos relations purent être rétablies, avec une surprenante rapidité, avec tous les pays, sauf avec l'Allemagne et le Japon.

Des réunions officieuses des membres du Bureau furent tenues à Bruxelles, Amsterdam, Londres, Paris, Genève et notre Secrétaire général se rendit à Chicago.

En novembre 1946, la première session officielle et régulière du Conseil Exécutif fut tenue à Paris. Il y fut décidé d'accepter l'invitation de la Chambre des Délégués de l'American Dental Association de tenir un congrès international à Boston.

On se rendit compte, cependant, que le délai restant à notre disposition était trop court pour permettre d'organiser un congrès dans les mêmes conditions et le même esprit qu'en 1931 et en 1936, que les conditions économiques et les possibilités de communications ne nous permettraient pas de nous attendre à une assistance normale.

(à suivre)



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THE MYSTERY OF FRIENDSHIP

Friendship is a mystery. It is a miracle. It is deeper than logic. No science can create it. No money can buy it. No art can explain it. No army can defend it or put it to flight. It is wordless. It is ineffable. It is Godlike. It gives comfort when everything in life seems to have failed. By its divine magic, even the gray mists of sorrow and pain are made to hold a rainbow of imperishable hope. Its source is older than the hills—hidden deep in the heart of the Eternal. FRIENDSHIP IS A MIRACLE.

—R. D. MCKEEHAN





HAROLD M. CLINE, D.D.S., F.A.C.D.
Vancouver, British Columbia

Newly appointed representative from B.C. to the
Board of Governors of the Canadian Dental Association.

Graduate of the University of Toronto, 1924.

Past President of the Vancouver Dental Society, the B.C. Dental
Association and the Vancouver Ferrier Study Club.

Member of the Council of the
College of Dental Surgeons of B.C.

Councillor from B.C. to the Pacific Coast Dental Conference.
Served with the Seaforths in World War I.



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BYGONE WOMEN DENTISTS

by J. MENZIES CAMPBELL, F.R.S.E., D.D.S. (Univ. Toronto), L.D.S. (R.F.P.S. Glas.),
L.D.S. (R.C.D.S. Ont.), F.I.C.D., Glasgow, Scotland.

ALTHOUGH Dentistry is, today, regarded as a profession, it was certainly not always so. Eighteenth century (and later) evidence, derived from contemporary books, blatant newspaper advertisements and prints, *etc.*, convinces us that it was then of very lowly status, and, not infrequently, conducted by ignorant mountebanks. Although the vast majority of these were men, whose antics often made colourful and amusing reading, nevertheless this article is restricted to fourteen women, who indulged in dental practice (many highly successfully) in the distant past.

Mrs. Giles embarked in the 1740's as an eradicator of superfluous hair, by means of a compound (sold at a guinea an ounce), guaranteed not to impair even the most tender skin.

In 1752, she, however, blossomed forth as a cleaner and preserver of ladies' and gentlemen's teeth. When this operation was completed, this astute woman sold the patient a brush and powder at 1/6d. to maintain the teeth in proper condition. It is interesting to note that these adjuvants were available only to those, who had paid her charge for the prophylactic treatment! Her house was at No. 2, Sherrard Street (opposite the Sign of the Fox), near Golden Square, London.

MADAME DESCLAUX, before coming to London in 1744, had been, for several years, engaged in practice in Paris, where she claimed to have attended to the dental requirements of

the Nobility. She attributed her outstanding success to the fact that she possessed the lightest touch of any dental operator in that Continental city.

She assured all ladies and gentlemen in London that they could, with confidence, reckon on a continuance of such skilful treatment being executed in the privacy of their homes. Her consulting hours were strictly limited at her lodging, Mr. Renoyles's, Cheesemonger, Princes Street, near Leicester Fields, London, being from nine to eleven in the forenoon, and at three in the afternoon. This enterprising lady also supplied a number of preparations for the teeth, including an opiate for relieving toothache, and an elixir for combating scurvy of the gums and mouth. In addition, she sold a solution, which cured inflamed eyes: and even dispelled black specks resulting from a hangover!

MRS. SILVIE was practising, in 1746, to use her own words, "at a Baker's in Porter's Street, the backside of Newport Market, Westminster, London". Her specialty was the construction and fitting of efficient substitutes for natural teeth: and she emphasized her outstanding prosthetic ability. She drew vivid pictures of people suffering from an inferiority complex, due to unreplaced teeth giving rise to disfigurement and faulty speech, and explained how natural teeth adjoining spaces tended to loosen.

She guaranteed that she could supply serviceable, ornamental, indiscernible, true-to-nature teeth, even in cases,

where other practitioners had failed. Incidentally, she naively informed the public in press notices that "Those who don't choose to make their grievances known by asking for the Artificial Teeth-Maker may ask for the Gold Snuff-Box and Tweezer-Case Maker". Obviously, this lady was very versatile!

MADAME RAUXCOURT arrived in London from Paris in 1750: and could be consulted at Mrs. Sadiere's in Church Street, St. Ann, Soho, London. She claimed not only to cure toothache and scurvy of the gums, but also to construct artificial teeth, indistinguishable from the natural dentition. Further, she invented, and sold, a tooth-powder and an opiate. This lady stated that she acquired her knowledge of dental practice from the "most famous Monsieur Caperon of Paris, Dentist to the King of France".

HANNAH CRIPPEN, in the beginning of 1775, was, with the aid of an assistant, continuing her deceased husband's business as Dentist and Phlebotomist at the same address, namely Baldwin's Gardens, near Gray's Inn, London. Little else is known of her.

MRS. DE ST. RAYMOND was practising in March, 1775, at Mrs. Blanchard's near the Minster Gates, York. She stated that she catered specially for the Nobility and Gentry of that city. She described herself as "Dentist and Operator" on the jaws, gums, *etc.* The scope of her professional activities was extensive. For instance, she judiciously removed destroying agents such as scurf, fur and tartar: filled hollow teeth, tightened loose ones: and extracted hopeless teeth and stumps, even when the skill of other practitioners had proved ineffective! Further, she transplanted teeth from the jaws of poor lads into the head of any lady or gentleman: and, straightened children's irregular teeth. Her special dentifrice for ensuring clean, sound, white teeth retailed at 2/6d per box: the same price as her antiscorbutic liquid for the gums. Her side-line was boring ears to accommodate ear-rings!

Two months later, this lady was located at 9, King's Square Court, Soho,

London. Her only additional claim to dexterity was that she could construct obturators, which were free from wires or other fastenings to the natural teeth.

Mrs. Raymond was still practising in 1790, at 24, Queen Street, Golden Square, London. She then boasted of superior skill in, and a long and successful experience of, surgical and mechanical operations in the mouth, adding that her work had the approval of the most eminent surgeons in England: also, that she had improved the construction of her obturators.

LA SIGNORA FOGGIONI, who had sometime earlier practised in Genoa, was, in 1777, established at No. 5, New George Street, Blackfriars Bridge, London. Her technique for curing toothache followed an unusual course: she claimed success merely by placing her finger on the affected tooth. As proof that this somewhat uncanny gift was free from trickery, she openly washed her hands in full view of the patient.

MRS. LEVIS, along with her husband, was flourishing in Bath in 1778, where she practised at her house in Queen Street. Besides constructing and supplying artificial teeth, and cleaning and polishing the natural ones, she prepared special tinctures and dentifrices. These last-mentioned were also sold at several well-known addresses in London. Mrs. Levis, when requested, executed dental treatment for ladies in their homes, provided due notice was given.

CATHERINE MADDEN was engaged in dental practice, about 1790, at 53, St. John's Street, West Smithfield, London. Her claims were somewhat pretentious, *e.g.* she could eradicate the most violent toothache in such a manner that there would not be any recurrence (although she infers otherwise, probably the "key of Gargenot" was her medium!). Further, she cured all affections of the gums and cheeks resulting from dental infections. Among Catherine's other accomplishments, she cleaned and polished natural teeth, besides preparing a powder and a tincture. And, she was ever willing, when required, to visit her clients (male and

female) at their homes.

MRS. HUNTER, who claimed to have, for some years, studied every disease incidental to the teeth and gums, was, in April 1791, practising at 32, Newman Street, London, with hours of attendance, 10 a.m. till 2 p.m.: and then only on Mondays, Wednesdays and Fridays.

Probably somewhat advanced for her times, she emphasized the æsthetic value of sound teeth, riveting attention on the fascination which these imparted to the face. She specialized in the care of children's teeth, filling and regulating them when necessary. For this service, she charged an inclusive fee of two guineas per annum. Her regular consultation fees for adults were:— One guinea for the first visit, and half-a-guinea for each succeeding one: or four guineas per annum with tooth-powder, tincture and brushes included.

This lady was very proud of the elegance and finish of the artificial teeth she supplied, assuring every wearer that these would perform the functions of the natural ones, without impairing the speech or breath.

A few weeks later, Mrs. Hunter had extended the scope of her practice to include the sale of a Cosmetic Lotion, not only for the eradication of pimples and scrofulous eruptions of the skin, but also to restore the bloom of youth. She emphasized that toothache was curable without extraction of the teeth: and announced that she was prepared to look after the teeth of girls attending Ladies' Colleges. In October of the same year, her address was 78, Great Titchfield Street, London.

MISS RACHEL WYLES, living in Chelmsford, Essex, in 1792, prepared and sold (at 7½d. a box, duty included) a medicine (obtainable also at many shops) for the cure of toothache in a few minutes. This was stated to have been prepared from a manuscript prescription of the recently deceased Dr. John Fothergill.

Another dental partnership consisted of **MRS. SEDMON** and her husband, both of whom practised at Newbury until the spring of 1792, when they

removed to Devizes. She, however, continued to visit Newbury every six months, and made arrangements for her special dentifrice to be available during her absence at Mr. Fuller's, Bookseller.

MRS. THOMPSON was, in 1808, located at 73 High Street, Southampton. Hitherto, she had visited Bath and Bristol during the season. However, the heavy claims of practice made that utterly impossible in 1809.

This wily lady reminded patients, whom she had not seen for a year, that she was anticipating their visits soon, but requested them to fix dates in order to avoid disappointment. She, also, emphasized the advantages of consulting her rather than itinerant dentists.

She specialized in rectifying irregularities of the teeth, and filling cavities with gold, silver, *etc.* Also, she sold an unexcelled powder for subsequently maintaining the teeth in sound condition.

Then there was Count Patence, Surgeon-Dentist to His Royal Highness, The Prince of Wales, *etc.* At the zenith of his fame in 1780, he was practising in Haymarket, St. James's, London. My sole reason for referring to him here is that his daughter, **MISS PATENCE**, succeeded to his practice. In 1824, she was functioning at 3, Panton Street, Haymarket, London. Although comparatively little is known concerning her, nevertheless, she, whose father taught dancing as a side line in 1770, could hardly have failed to absorb some of her parent's colourful personality. For instance, one of his many bombastic advertisements read:—

"Jove once descended from on high,

"On clouds resplendent stood,

"Survey'd the waters, earth and sky,

"And found his works were good.

"Said he, there's something wanted still,

"Creation to compleat,

"Go, make a PATENCE to my will,

"Kind, generous, good and great.

"To work they went, and made the man,

*"Of flesh and blood most pure,
 "Whose teeth excel all men's, and
 can
 "The worst affliction cure."*

In referring to her deceased parent, she, with innate modesty (?) wrote "Whose well-known superiority in his profession as a dentist for many years needs no other comment than his name".

Miss Patence explained that she continued to supply artificial substitutes for lost teeth: and that these were all fashioned in a most elegant and accurate manner. Her hours of attendance were from eleven to four o'clock, and her terms half those of other dentists!

MRS. JOHNSON, whose specialty was a preparation of Soothing Syrup (2/9d a bottle) for the easier eruption

of children's teeth, was, in 1815, carrying on business at 94, Newnam Street, London. In 1825, the name of her preparation was altered to American Soothing Syrup: and it continued to have an extensive sale. She was now located at 28, York Place, City Road, London. And, her hours of business were restricted: nine to eleven on Tuesday and Saturday mornings.

In reviewing these practitioners of the past, it would be well for us to make due allowance for the times in which they lived. Yet, in spite of obvious shortcomings, they forged definite links in the development of dental science and practice. We should, therefore, tend to view them as leniently, as sympathetically, and as understandingly, as we sincerely trust the more enlightened dentists of 2148 will think of those of 1948!

ANNOUNCEMENTS

Montreal Fall Clinic

The 24th Annual Fall Clinic under the auspices of the Montreal Dental Club will be held at the Mount Royal Hotel, October 27 - 29, 1948.

Dentistry 1923

This notice is for the attention of all Canadian dentists who are graduates of the class of 1923. To remind you—this is the 25th anniversary of your graduation—the only such one you will ever have. To help you suitably celebrate it as a unique mile-stone in your career, a special '23 dinner is being planned to be held during the Canadian Dental Association Convention at Murray Bay, Que., June 20 - 24.

The undersigned will welcome an intimation that you plan to attend and any suggestions you may have to aid in commemorating this event.

EDWARD T. BOURKE,
 Henry Birks Bldg., Montreal 2, Que.

Public Health Dentists

It is proposed to hold a meeting of Canadian Dentists who are actively interested in the field of dental public health during the 1948 Convention of the Canadian Dental Association at Murray Bay, June 20-24.

The object of such meeting will be to discuss the possibility of organizing an Association of Canadian Public Health Dentists.

Anyone desiring information respecting this meeting should write:

DR. HUGH R. McLAREN,
 211 Huron Street, Toronto, Ont.

ADULT EDUCATION IN DENTISTRY

by J. W. NEILSON, B.A., D.D.S., M.Sc. (Dent.),* Edmonton, Alberta

EARLY in the practice of periodontia the necessity of adult education is apparent, and while the application of these educational principles may be more important in this field of dentistry than in some others, their implementation is advisable in almost any branch of dental science. Therefore, this paper is submitted with the purpose of bringing to the attention of the dental profession the sore need for more of this teaching.

A good deal has been written on the subject, "Adult Education in Dentistry", but apparently much of the good advice has not been heeded in actual practice. Indeed, certain aspects of education as they should pertain to dental practice have been neglected entirely. A dentist's professional time should be divided between two activities. He should perform the various technical procedures for which his training has fitted him, but he should also spend a relatively small but equally important portion of his time in the education of the public to the value of dental care. Too few dentists realize this second responsibility. They veer away from it, giving a multitude of reasons (mostly selfish), for their behaviour. Often they seem to forget that they have this great responsibility to their patients, their colleagues and their community.

It behoves a young dentist to study his professional confrères. He will find frequently that the true leaders in dentistry are also outstanding educators, perhaps not formally of undergraduate students in a dental school, but informally of the public. Any practitioner who follows these leaders' patterns diligently and conscientiously will opine that their pursuance has paid handsome dividends in many ways. In the education of others, a man gains an education himself. This individual leads a fuller, more fruitful and happier exist-

ence when he shares his professional knowledge with others, because in return, he receives information from them.

Having convinced oneself that the best approach to practice is an educational one, one must enquire about the steps necessary to implement it. Dental health education, according to McCall must provide two things, firstly, to arouse the interest of the public and the profession; and secondly, an accurate source of information about teeth, tooth care and food. The latter often can be a part of the first objective. As an example McCall⁸ presents some data on the value of early and continuous care. In the average case a person who neglects childhood care, and appears only irregularly at the dentist's office thereafter would require \$811.10 for this treatment, up to sixty years of age, and despite this, he would be wearing dentures at that time. On the other hand, one who has provided regular care for his teeth will have spent only \$357.20 and will have a sound dentition at the sixty-year mark. These estimates are made on 1938 Guggenheim Dental Clinic rates. This in itself, is a very understandable phenomenon, but it is doubtful if many people are aware that it prevails. More of such knowledge should be disseminated by the dentist.

The following figures may be accepted as reasonably reliable! In this country seventy percent of people can afford simple dentistry and ten percent can afford the best, making a total of eighty percent of the population. But only twenty percent of Canadians receive adequate dental care. One wonders about the other sixty percent. One of the fundamentals of any adult education program is to create an interest in a recognized need, and in the fulfilment of this fundamental, the dental

*Associate Professor of Periodontia, Faculty of Dentistry, University of Alberta.

profession falters badly in its motivation of the sixty percent of people. To quote Irwin and Wilson,⁵ "A satisfactory program of dental health education should consist of authentic information presented in such a way as to motivate desirable action in obtaining dental care. Such care is essential for the present and future protection of the dental health of the American people."

The seven most probable reasons for failure to appear for dental care follow:

1. Fear of pain and cost.
2. Pressure of other business.
3. Ignorance of the true condition of their mouths.
4. Lack of knowledge of the local and possible systematic effect of neglect.
5. Procrastination.
6. The inclination to spend money on luxuries instead of dental care.
7. Lack of habit of going to dentist.

Most of these reasons could be eliminated by the dentist if he would awaken to his professional responsibility.¹

If it may be assumed that the dentist is "awakened", the next problem which arises is the selection of the steps that best fulfil his educational obligation to the patient. There are several channels open, and the techniques of each often overlap. Perhaps certain general suggestions are in order. Dental health education is nothing more than the presenting of the facts so intelligently to the man being educated that he sees the proper dental health attitude or habit to adopt.¹ The avenues available for this sort of presentation may be divided as follows:

1. *The Public.*

By the "public" is meant the millions of average citizens who are laymen in health matters. These laymen include those people who appear regularly for dental treatment, and also those who do not appear at all. It is these two groups only with which this paper is concerned.

2. *Special Adult Groups.*

- a. The teaching and nursing professions.

- b. The public health profession.
- c. The medical profession.

These three groups constitute a special membership for the education of the public in good dental care.

3. *The Dental Profession.*

- a. The undergraduate.
- b. The graduate.

THE PUBLIC

Several methods are available for the presentation of dental health education to the public. These methods may be inter-related, and they may be employed singly or together as the occasion demands. Some of them follow: a. Chairside Education; b. Visual Aids; c. The Lecture; d. The Radio Address; e. The Newspaper; f. The Pamphlet.

CHAIRSIDE EDUCATION

According to Ante, the dental appointment is the time in which to teach the adult patient, for at that time, he is interested, otherwise he would not have come. Temporarily, therefore, one of the great obstacles, lack of interest, is overcome at the chair. The dentist must make certain that this interest is not lost. If the patient is told, and is shown what constitutes good dentistry, his confidence is inspired. It is important firstly that this explanation be made in language which the patient will understand. Irwin⁶, who has made a comprehensive survey of dental health education states, "All the sure knowledge we possess about means to dental health can be summed up in a few sentences." This statement is an index to a second and a third point in patient "chats", namely brevity and accuracy. Accuracy, at times, can be highly embarrassing, but it is even more highly important. Therefore, the duty of the good dentist is to keep himself informed, and to know the scientific answers to patients' everyday questions. Irwin and Wilson⁵ made a study of the dental health literature of the early 1940's, and their results are startling, to say the least. Of one hundred and forty-five statements found in publications of state health departments, over forty-six percent could be listed as

facts, five and one-half percent as fallacies, and over forty-eight percent as controversial, according to their own criteria of evaluation. It is little wonder that Davis³ says, "Patients are not to blame for ignorance between good and bad dentistry, or for misinformation they have absorbed from advertising, and misinformed friends." Davis⁴ also published the results of a review of eighty textbooks. It was found that the dental health statements contained in these texts were erroneous in every instance. It would appear that textbooks certainly are poor prospects with which to further good dental health education.

The use of demonstrations and visual aids in a dental office to illustrate dental conditions is unusually helpful. Splendid examples of visual aids in an office are the bite wing radiograph and the study model. Such aids clearly and quickly disclose in a very personal way any existing conditions, whereas a lengthy verbal explanation of the same condition would be far less satisfactory. The same personal factor is apparent when the patient is given a hand mirror to hold, and his own dental problems are outlined visually in his mouth. It is regrettable that full advantage of visual aids seldom is taken. Some operators frown on their use, saying that it lowers the profession to the level of salesmanship. There is considerable truth in this attitude, for in unscrupulous hands, the indiscriminate use of visual aids can do considerable harm.

The question and answer method is another splendid technique to educate the patient. The dentist misses a fertile opportunity when he hurries a patient away, and discourages questions about the very things which the patient should know. In fairness to the profession it is not always the dentist's fault that he dismisses such questions with a shrug. A good many dentists might be happy to finish an appointment by answering questions, but with a waiting room full of patients, they do not feel that they can afford that time.

The office appointment provides an excellent opportunity to pass out re-

liable, interesting dental educational literature for patient reading, and for stimulation of continued interest. Some operators describe what they are doing, or plan to do in the patient's mouth, thus securing the confidence of the suspicious. Many patients appreciate constant information and consultation about their dental operations. The parent in the chair often becomes secondarily interested in his child's teeth, and the dentist should remember this interest if he wishes to perform family dental health education.

The patient who has just finished an appointment with a dentist-teacher should leave the office with a new or revived appreciation of oral health values and good oral procedures, with a general idea of what dental neglect entails, with a desire "not to let it happen again", and with an interest in spreading the "gospel" abroad. How long these attitudes will maintain may depend on the frequency with which he encounters other forms of dental health education, publicity or propaganda.

VISUAL AIDS

Materials in great variety used in several sets of circumstances constitute visual aids. They can be regarded as indispensable to almost every aspect of dental health education for patients. A simple illustration in a magazine, a single model shown in the office, an elaborate exhibit occupying considerable prominence at large or small gatherings; all are visual aids. The planning, and carrying out of large projects is well defined in an article by Salzmann. The profession must give the scheme its enthusiastic support, and contribute to the planning of the campaign or the exhibit, after which participation by any interested parties should be sought. Circus stunts should not be employed, yet a happy medium of publicity is very essential. Salzmann¹¹ stresses also the value of an exhibit as a source of newsworthy material, and points out that reporters almost invariably give it a "favourable spread".

The utilization of visual aids is too

large a subject to be discussed further here. It would be better to say merely that an adult education program in any phase of dental health care loses a great deal of its value if visual aids are not employed in one way or another. These tools may be motion pictures, still pictures, drawings, charts, graphs, radiographs and models. The demonstration is the only sure way to teach certain points about dental health care, such as tooth brushing. Carefully managed group visits (in Visual Education, the so-called "School Journey") to a dentist's office may be employed also as a technique of visual education. In the matter of reliable office visual aids, (and all small aids) it might be helpful to point out that the American Dental Association provides a selection at reasonable prices.

The Dental Hygiene Institute of Chicago² is an ardent advocate of the use of motion pictures and the possibilities of such aids cannot be belittled. The Institute has produced two such pictures portraying the dental problems of a typical American family. The dental details of the films were supervised by dentists, and at each showing a dentist is present to answer any questions. This scheme is a very commendable one, but is limited by the expense involved and the possibility of securing a showing.³ However, individual dentists or groups do make motion pictures of certain technical procedures, and these films usually are available for the use and education of their colleagues.

While the judicious use of illustrations is to be commended, the idea of making the whole dental health lesson a fantasy is to be avoided. For example, an aid depicting little red devils attacking the teeth is a poor procedure, even for children.

THE LECTURE

One of the great criticisms of the lecture is its impersonal nature, and because of this drawback it can be one of the most ineffective methods of stimulating adult interest. Probably no dental health education can be duller than

a long, technical, unillustrated, poorly prepared public lecture on dental needs. If inaccuracies were added to these shortcomings the listener definitely would be better off asleep. However, one must not condemn the lecture completely. When employed intelligently, it can reach a large number of people in a positive way. In the dental health talk, the lecturer should stimulate thought which manifests itself in action. This action should take the form of a visit to the dentist to determine in a more personal way what is, or can be, the value of good dental care and procedure. It may only take the form of proper tooth brushing or the discontinuance of damaging oral habits. But to return to the lecturer, his talk above all, should be scientifically accurate. Therefore, he must know his subject, as well as the questions which likely are to be asked—and the answers. The talk should be properly illustrated, if possible, and it never should be longer than necessary. He would do well to make some inquiries about his audience; for instance, are they parents? Have they any prejudices or idiosyncrasies? What is their intellectual capacity and dental background? With all these facts in mind, he then should speak to them with something resembling a "psychological approach". The other requisite for a good dental lecture to a lay group is the avoidance of unexplained technical terms. It is far better to lean over backward and make the words too simple, but many speakers seem to fear that this simplification will cast an aspersion on their own profound knowledge. Such a speaker would provide a candidate for more sorely needed adult education than the individual member of his audience. The addition of a demonstration, or a question and answer period at the conclusion of the lecture, is a splendid idea in most instances. A panel discussion is often advisable for layman groups when points of dispute may be decided by authorities on the question. Size of audience would make some difference in choice of these latter methods.

RADIO TALKS

What has been said of lectures applies also to radio talks with certain modifications, and some added difficulties. The ease with which the listener can "turn off the lecture" necessitates an even more interesting subject matter, with a particularly attractive introductory paragraph. One should make certain that there is sufficient time to conclude the message without a rapid flow of words. A sincere, friendly and personable manner is indispensable if each listener is to feel that he is being told personally why he should visit his dentist regularly, as well as the other "whys" of good dental health. Another handicap of the radio is the understandable reluctance with which the average practising dentist gives such a talk. He fears the criticism and the unfavourable reaction of other practitioners. This difficulty could be surmounted in one of two ways. The speaker might act in an anonymous capacity, or he might not be engaged in private practice. In any case, the program should be sponsored by a recognized dental body. The great advantage of radio is the widely diversified audience it commands, and a dental radio talk should stress the too often misunderstood fact that good dentistry may be within the reach of the average man, and is not a luxury service.¹⁰

NEWSPAPERS

Publishers often shy away from dental health stories because of the lack of news interest. It is difficult sometimes to publish material, except as advertising. Another aspect of newspaper (and radio) education is the advertising of questionable or directly harmful products. There is no doubt that the public is impressed by certain types of this "education". The dentist should do everything in his power not only to re-educate the public in these matters, but he should also try to curtail this advertising which is a flagrant misuse of the peoples' trust. United action by local, provincial and dominion groups probably is the best plan here. How-

ever, one author¹² holds very little hope in this direction, and concedes the advertising practice to "freedom of speech, freedom of the press, and the American Way of Life". Rather, he says, perhaps idealistically, but very commendably that, "the solution lies in raising the intellectual level of the general public on health matters to the point where they will be able to analyze this quackery, and reach a decision that will benefit them the most".

PAMPHLETS AND OTHER PRINTED INFORMATION

Perhaps the most widely used avenue of approach to adult education in dental health at the present time is the printed word. How valuable is it? Again the statement must be made that the printed word, when properly used, is a fine tool, but on the other hand it can prove highly dangerous. The dentist should have a knowledge of good and bad publications, and keep a supply of the former available for those parties interested in dental health education. When one considers some of the previous remarks regarding the great number of booklets available, and the high percentage of fallacies contained therein, it is quite a problem for a busy dentist to evaluate all printed statements. Rather, would it not be worthwhile for the Canadian Dental Association to establish a body to criticize and "censor" these publications? Under such a plan the dentist would be assured that his educational literature was accurate. Until such time, however, he should rely on these booklets which he knows to be true, rather than prescribing indiscriminately to all and any literary efforts sent his way.

In the writing of a pamphlet on any dental subject for the public, the principles described previously under patient, public, and radio educational methods should be followed. The addition of illustrations is to be commended, and the binding should be attractive to the layman. A thorough grasp of the subject is necessary, as is the case in any field. Otherwise, the publication, and the work of producing it, will be

wasted, as will be the reputation of its author.

As stated previously, this discussion deals only with the adult education methods of direct "dentist to general public" relationships, and not of the methods pertaining to any special group. Even in this restricted field, only the highlights of the problem have been touched upon. It is not a simple problem, and unfortunately, it is approached too frequently as such. When considering a possible solution, it is wise to remember that fundamentally, acceptance of dental treatment is in opposition to several laws of human nature.⁹ The law of inertia acts against dentists. People are in the habit of not going to the dentist, therefore they do not seek preventive care. Usually they appear at a time when the law of effect also works against the dentist. The condition has progressed to such a state that the patient's office experience is often dissatisfying, annoying, and even damaging, so that the effect is bad, and the patient has no psychological desire to return. The dental profession must try to alleviate these attitudes by a program of education within, and without the profession. The public must be educated to the fact that going to the dentist, for preventive dentistry, is a much less expensive and less painful procedure than going for so called "crisis dentistry". The dentist must be taught that any initial experience of the patient is influential, and that an interesting, explanatory, and painless introduction to dentistry is of inestimable value.

Knutson⁷ compares health education to the use of a fertilizer by saying, "The use of a fertilizer does not reduce ap-

preciably the amount of field work to be done, but it does make a given amount of field work more profitable." This is a fair comparison, but in dentistry it could be carried further, because intelligently handled, it will cut down the amount of care to be provided, which is a highly desirable outcome when the public is crying for dental care as it is today.

On graduation, the title "Doctor" and the honour attached thereto is proudly accepted, but the dental surgeon never should forget that in the Latin, "doctor" means "teacher". When the dentist dismisses his patient, his service is not complete unless he has taught that patient a fuller and more honest appreciation of dentistry and the value of dental service.

BIBLIOGRAPHY

1. Ante, I. H. Chairside dental health education. *Canad. Dent. A.J.*, 8:15-17, Jan., 1942.
2. Bessems, J. New dental health film produced by Chicago group. *Am. Dent. A.J.*, 31:109-10, Jan. 1944.
3. Davis, W.R. Editorials Patient Education *Mich. S. Dent. J.*, 23:25-6, Feb. 1941.
4. Davis, W. R. Dental health in textbooks. *School Health Series Bul. No. 4*, Lansing, Michigan, Department of Health, 1940, 4 pp.
5. Irwin, V. D., and Wilson Netta, W. An evaluation of dental health literature. St. Paul, Bruce Pub. Co., 1942, 58 pp.
6. Irwin, V. D. Educating parents on how to save teeth—and money. *Dental Health*, 4:6-7, Nov., 1944.
7. Knutson, J. W. Appraising the dental health program. *Am. Dent. A.J.*, 29: 543-55, Apr., 1942.
8. McCall, J. O. Fundamentals of dentistry in medicine and public health, New York. The MacMillan Company, 1938, 145 pp.
9. McClusky, H. Y. Psychological Blocks to Good Health Practice. (In proceedings of the institute on dental health economics), Ann Arbor, University of Michigan, School of Public Health, June, 1944 (n.p.)
10. Oral Hygiene Committee of Greater New York, Radio Manual, New York, 1939.
11. Salzmann, J. A. Principles and practice of public health dentistry. Boston, The Stratford Co., 1937, 570 pp.
12. Walker, A. Conference of State Society Officers. *Dental Health Publicity*, 40-42, Jan., 1932.

ANNOUNCEMENT

Ontario Dental Association

The eighty-first annual Convention of this Society will be held on May 17, 18 and 19 at the Royal York Hotel, Toronto. Those planning to attend are invited to arrange hotel accommodation and register as early as possible with the Secretary of the Association at 86 Bloor Street West, Toronto.

DENTAL PUBLIC HEALTH AND PUBLIC DENTAL HEALTH*

by L. W. STURGEON, M.D., D.Ph., Welland, Ontario
Municipal Officer of Health, Welland-Crowland Health Unit

FIRST of all I wish to express my appreciation as a practising physician in a specialized field for the opportunity accorded to me by your society to speak to you. I further appreciate the fact that this invitation has only come because we have in our Health Unit area a Public Dental Health program which I am convinced will answer many of the problems previously unanswered and will set the stage for similar programs, not only in Canada, but possibly in the North American Continent and finally may go beyond these borders. I, therefore, reiterate that I consider this a compliment to those who were instrumental in instituting the program and more particularly Dr. Honey, who is doing the actual groundwork.

HEALTH UNIT

It may be in order at this point to discuss what a Health Unit is, so as to give you some background. This is done because many of you are undoubtedly aware of what Health Departments in urban areas have been doing in the past. By the same token, many who come from the rural areas undoubtedly have not had any contact with a health program organized on the health unit basis.

The Health Unit idea is not new, as we see the first Health Unit established in the State of Washington where the Medical Officer of Health during a typhoid epidemic propounded the principal of the County area, rather than a local health department. This was done because he was experiencing difficulties in coping with this typhoid epidemic, due to influences beyond the borders of the city wherein he was working, and over which he had no control. About the same time, in the year

1908, a Health Unit was established in Guilford County, North Carolina, the groundwork of which had been laid three years previously. Incidentally these two Health Units are still going strong. In Ontario the Rockefeller Foundation decided to make grants in the early 30's and we find the first Health Unit established in the united Counties of Dundas, Stormont and Glengarry for a period of five years on an experimental basis. After five years' operation, despite a depression, the County Council of the United Counties decided to carry on and this was the first Health Unit established in Ontario. Following this in Kirkland Lake and Timmins Health Units were established in the early 40's and the Unit in Welland June 1, 1945. It is not my purpose to outline in detail the work carried on in a Health Unit but I should say briefly that Health Units as set up now are staffed with full-time employees, especially qualified in Public Health post-graduate work, and operating over a County area in general. In our own case and in the case of Lambton County Health Unit, we only cover part of the County. The minimum amount of population recommended is 50,000 people, but actually from experience, 100,000 population is the ideal, and it is my own considered opinion that Health Units should be set up on this basis. In this way, the administrative unit would be of sufficient size and have a sufficient budget to insure complete coverage. The functions include sanitation, communicable disease control, including venereal diseases and tuberculosis, maternal and child hygiene, school health services, Public Health nursing, Public Health education and co-operation with other health agencies. This is a basic program. In

*Presented at the Eastern Ontario Dental Association Convention, Sep., 1947.

addition, it is recommended, and I wish to stress this point, it is recommended that dental hygiene, mental hygiene, accident prevention, vital statistics, industrial hygiene, medical care, administration, personnel management and training and hospital administration will be added later.

EXISTING DENTAL CONDITIONS

On the surface, this would seem to give some adequacy. However, what do we find when we commence a Public Health program? In the case of school medical services, physical examination reveals that what has been known for generations, or at least for a generation, namely, that dental problems are affecting practically all of the school population. As a student taking the Public Health course we heard Dr. Harry Thomson make the statement that 87% of the population of Canada were suffering from dental defects. We have found, from an examination of 6,000 children in the Unit area, that the figure is higher than this, probably 95%. However, it should be pointed out that the average medical man, knowing little or nothing about dentistry, would say that this figure is too high and I would refer you to the July issue of the Canadian Dental Association Journal, where it is stated as a result of a survey that caries was found in 71% of the children of British Columbia and 47% of those in Saskatchewan. It is emphasized that this survey was made by a physician and a nutritionist and, unless there is some factor of immunity in these two provinces, I would not want to accept these figures as giving an entirely true picture. The inference is simply this—and I make it without any apology—that the average medical examiner is not in a position to estimate the dental situation in any group of people, due to lack of training. Conversely, we might assume that the dental practitioner is not in a position to estimate physical status or well being by virtue of his specialized training. Therefore, it follows that since the problem is so pressing and we have between 90% and 100% of our people

suffering from dental defects, as exemplified by caries in the teeth, that dental public health cannot be divorced from even the earliest stages of any Public Health program. What is being done about it? I need not point out to the dentists here that something is being done and I further may say that what is being done will undoubtedly be effective by virtue of the fact that you have the experience of medical workers in the Public Health field of a good many years, with the consequent mistakes that are made as an example of what to do, and probably more important, what not to do.

DENTISTRY'S RELATIONSHIP TO PUBLIC PROGRAMS

As you are aware, dentistry has been a part of the Public Health program, but from my point of view, only as an expedient, a sop, or probably as a political gesture on the part of some layman who knew little or nothing of what the fundamental problem is. Recently I visited a city with a dental program being carried on under the Board of Health. Here we found one dentist endeavouring to do something for the school children in a city of 35,000. His statement was that he saw approximately 50% of the children of school age in this city. I leave it to your judgment as to what form the dental care was taking. This was an expedient, in turn probably due to the activities of politicians who as a result of pressure from interested voters, could say that they had a dental program. The dentist himself admitted the shortcomings of what was taking place, and I regret to say that unfortunately the Medical Officer of Health appeared to be satisfied with the program. In contrast to this, we are aware that in other areas of the Province of Ontario at least a start is being made in what is considered the right direction. *The city of Ottawa itself has recently appointed a Public Health trained dentist to initiate and carry out a program. Likewise in Windsor a program is in operation as well.* I only hope that Drs. Clark and MacLaren will be able to

withstand the pressure of the uninformed to make them deviate from the path of righteousness.

PLAN AT WELLAND-CROWLAND HEALTH UNIT

Why do I say this? We were more fortunate in our area. Early in 1946 Dr. S. A. MacGregor spoke to a service club in our city. Previous to his talk, my own thinking, unfortunately, was geared to the fact that *Dental Public Health* was something we might get around to in time in our Public Health program, and more important, the place of the dentist would be concerned mainly with treatment. Previously, under Dr. K. M. Phillips the County had been organized and a Dental Public Health Committee was in an embryo state here. As Medical Officer of Health I was a member, but until MacGregor spoke to us I lacked any conception of what a Dental Public Health program should be. However, it was refreshing to hear a specialist in dentistry for children make some concrete proposals as to what we had known long since and lost awhile. I regret to say that a practising Public Health official from an adjoining county when asked his reactions by the speaker at the group meeting afterward had not been so affected as I was. His statement was "Get the dentists out of the army and we will not have any dental problems". From where I sat at this meeting I may say that after this remark MacGregor was most unhappy, as judged by the appearance of his face. I will admit that I was in a receptive mood, since I was in the process of examining school children at the time and was keenly aware from my limited knowledge of dental conditions of the appalling need of Dental Public Health. Since the local secretary of the Red Cross has his office in the same building, I had propounded to him the desirability of setting up in our Health Unit area a dental program with the aid of the local practising dentists. *Our plan was to select a small group and have them see their dentist*

every six months from the age of 2½ years. Those unable to bear the whole cost were to be subsidized by the local branch of the Red Cross. It was my idea that we might prove or disprove the advantages of "Brush your teeth twice a day—see your dentist at least twice a year". However, the picture was broadened; through the salesmanship of Dr. MacGregor the Red Cross provincial society decided to set up a demonstration area under the direction of a dentist with Public Health training and we were fortunate in this respect that they were able to secure the services of Dr. S. Lee Honey who had not the necessary background to establish a demonstration purpose. The plan was that he would spend two years in the Unit area. From experience this would seem to be not sufficient and I trust that Dr. MacGregor will be able to arrange to have him spend longer. Now what have we found out?

In September, 1946, the Dental Survey was commenced in connection with the Welland and District Health Unit.

Objective: To determine the extent of dental defects among the children in the area; to plan an educational campaign which would reduce these defects to a minimum.

During the school year, 6,178 were examined. The number of prematurely extracted teeth (5,280) and teeth to be extracted prematurely (6,969) is shocking. The number requiring orthodontic treatment is about 25%. Of these examined the appearance of 6% is marred by irregular teeth. There was an average of five dental cavities per child in the area. Only 1 in 5 had received restorative service.

Through conversation with teachers, we learned that those with the largest number of cavities were usually retarded—above average age and size for their class — and it was noted that these students were frequently absent through illness or other causes.

When the school term ended and the parents had received notification of 30,000 dental defects, the local dentists, although co-operative, were

swamped; they appealed to the Dental Public Health Committee for assistance. This resulted in two dentists being established in Dr. Meek's office for the two summer months, doing children's work only. They were fully employed for the two months, and their services were very much appreciated by all concerned.

The second round of examinations has now begun, and it is interesting to note that in one township where they had not had health service previous to 1946, the average number of cavities per child in the first survey was 5.1. In the 1947 survey the average number of cavities per child was 3.6. In contrast with the 1 in 5 who had restorations previous to the 1946 survey, we now find that 1 in 3 have now had this service and of these 1 in 6 have visited the dentist for the first time, since our survey was made in the district.

Our chart calls for questions re diet, particularly the between-meal-snack, and it may be interesting to note that cases where the cavities found were above average, these students all indulged in a carbohydrate diet between supper and bed-time. The answers regarding what they took were largely cereal and milk, with sugar; chocolate drinks, usually hot, with sugar; the carbonated waters (bottled drinks); jam sandwich.

Obviously our problem here is one largely of education—education of ourselves, practising dentists, parents, teachers and pupils.

CONCLUSIONS

What then are the conclusions that we can draw?

1. Dental Public Health is a prime necessity in any Public Health program. It should be carried out by a dentist with an adequate professional background and training, followed by at least five years of practice, and a dental public health course at the university. He should be adequately paid because he is or should be a certified specialist in his field and his work

should be an integral part of the Public Health Unit.

2. The local Dental Public Health organization, made up of the profession and other lay representatives, is a necessity in any community, where a health program is in operation.

3. That the dental profession should be enthusiastic in their support of such a program, so that the uninformed, the politicians, etc., will not inflict on the public dental services, that only can be called expedients.

4. That federal funds in particular are necessary to supplement, in the early stages at least, the budget of Health Departments to make this possible.

In conclusion may I make a few suggestions to you—In the words of Terrence E. Billings, "The Man on the Street is hungry for explanations of things Medical in language he can understand." And in the words of your own Dr. G. V. Tario you have a challenge, "Not in its ability to construct aesthetic restorations and replace teeth but in its potential ability to prevent and control disease of the oral cavity: will dentistry establish itself as a great and true health service"—here then are some objectives:

1. Help every Canadian appreciate the importance of a healthy mouth.
2. Help every Canadian appreciate the relationship of dental health to general health and appearance.
3. Encourage the observance of dental health practices including personal care, professional care and proper diet.
4. Enlist the aid of all groups and agencies interested in the promotion of health.
5. Correlate dental health activities in an all generalized health program.
6. Stimulate the development of resources for making dental care available to all children and youth.
7. Stimulate all dentists to perform adequate dental service for children.

VITAL PULPOTOMY AS AN EFFECTIVE AND ECONOMICAL PROCEDURE

by CAMERON T. WALSH, B.Sc., D.D.S., M.S.

A FAITH is ever greater than a fear. Substantiating technical procedures and data, especially in the last decade have increased the modern practitioner's faith in the vital pulpotomy technique and its essential place in the treatment of vital exposed pulps in the primary dentition, and in young permanent teeth. This paper will attempt to provide the dental operator with a review of the information pertinent to this conservative and efficient operation.

A pulpotomy may be defined as the aseptic removal of the coronal portion of a vital uninfected pulp. The effort to maintain the radicular portion of the pulp vital and unaltered, distinguishes a vital pulpotomy from pulp mummification. This latter method calls for devitalization of the pulp by means of arsenic or a similar agent, and the removal of the coronal portion and the capping of the pulp stumps remaining, with suitable antiseptics. Grossman² differentiates a pulpotomy from a partial pulpectomy. In the latter, the entire pulp except the extreme apical end, is removed. The pulpotomy also has been designated as a pulp amputation, or as a vital pulp amputation if the vital technique is being discussed. The primary objective is the preservation of the vitality of that portion of the pulp contained within the root canals.

As far back as 1851, Codman³ described a crude method of pulp treatment to retain the vitality, and claimed to have been successful under favourable circumstances. Among the other notable pioneers later on, were found the names of Cutler⁴, Sangster¹⁵, Hopewell-Smith⁸, Davis⁴, and a score of German workers, while Leonard¹⁰ in 1924 reported highly satisfactory re-

sults following the pulpotomy in selected cases.

It, no doubt, occurred to these investigators that an effective and economical technique for handling vital exposed pulps in primary, and in young permanent teeth, was a matter of urgent importance. Extrusion, malalignment, drifting, and impaction of teeth are but a few of the specific disturbances of occlusion that may occur, as verified by Salzman¹⁴ in a study of the dentition of a group of children who had lost from one to four young permanent molars.

When advocating the vital pulpotomy technique, one should not condemn the devitalization method in spite of less successful cases, as the end result for both when properly handled, often is the maintenance of the tooth in health. With the devitalized technique, two appointments are required, while occasionally toothaches are caused by the devitalizing paste. A fracture of the temporary cement will lead to leakage and either an undevitalized or infected pulp. By the use of the vital technique, the complete operative procedure and permanent filling can be completed usually in one appointment. One of the complications, however, is a copious haemorrhage into the pulp chamber, a haemorrhage which can be controlled by topical applications such as adrenalin hydrochloride, 1:1000, or neosynephrin hydrochloride, 1 per cent, and maintained under pressure as recommended by Easlick⁵.

The vital pulpotomy technique is limited to certain considerations. The tooth definitely must not be putrescent, as shown by radiographic and clinical examination, and enough of the crown must be left for an adequate restoration.

DIAGNOSTIC FACTORS

Before proceeding with the actual pulpotomy operation, certain diagnostic factors should be considered. Any history of a previous tooth-ache, the extent of exposure, and the type and amount of haemorrhage, all should be noted. Some operators restrict a vital pulpotomy to immediate pinpoint exposures, while Zander and Law¹⁸ and others conclude that degenerative changes in the coronal portion of the pulp may not necessarily contraindicate the vital pulpotomy technique provided healthy tissue exists in the root canals. However, all are agreed that the sooner the pulpotomy is performed, after exposure of the pulp, the better the chances are for success.

ANAESTHESIA

Deep anaesthesia is essential during a vital pulpotomy, more profound in fact than would be required for extraction of a tooth. The inferior dental block anaesthesia is used for the lower molars of all children including the preschool group, and may be reinforced by periodontal infiltration into the socket of each root, and by a block of the long buccinator nerve. For the upper teeth, subperiosteal infiltration is used both buccally and lingually. In the four maxillary incisors, a naso-palatine block anaesthesia may be required. Later, after convenient access to the pulp itself (a large enough opening to accommodate the needle), deep anaesthesia can be assured by injecting directly into the coronal pulp and canals.

OPERATIVE PROCEDURE

While the anaesthesia is taking effect, the tooth is isolated by a rubber dam and sterilized with tincture of mercuric iodine. Sterile operating instruments are employed. Ivory rubber dam clamps, numbers 5 and 14 are found to be most suitable for permanent molars. McCall¹¹ advocates besides sterile instruments and supplies, the operator scrubbing up and wearing

rubber gloves; and burs and other implements dipped in alcohol and flamed, before being used.

The next step, after having disposed of undermined enamel and carious dentine (and injecting into the pulp if necessary), is to open wide the roof of the pulp chamber with a sterile fissure bur 558 or 559. A large round bur is then revolved at a slow speed about the pulp chamber floor, to amputate the tissue at the level of the openings to the root canals. In anterior teeth the amputation is made at a level about one-half the length of the available root. For a primary molar or anterior permanent tooth, a number 11 round bur is preferred for the amputation.

Some operators, notably Zander and Law¹³, and Grossman⁷, prefer a surgically clean wound at the junction of the coronal and root portions, and suggest removal of the coronal portion, by means of sharp spoons and knives. These operators have the opinion that the use of the round bur tears loose the bulbous portion of the pulp from the root portion, leaving a lacerated wound surface over the root portion, and delaying the healing.

For washing the wound surface (the control of haemorrhage has been mentioned previously) Easlick⁵ advocates a sterile saline solution or mild sodium hypochlorite solution, and drying of the pulp chamber with sterile cotton pellets. Grossman⁷ suggests either sterile water or hydrogen peroxide carried into the tooth by means of a small syringe fitted with a blunt needle, while Waas¹⁷ uses a mild antiseptic, such as camphophenique or acriflavine 1:1000. Davis⁴ argues that the essential factor is that a small blood clot be allowed to form, and to remain on the wound to assist in establishing the collateral circulation at the seat of the wound. Therefore washing fluids or dressings should not be such that are blood solvents, or blood diluents, as these will destroy the blood clot.

For the dressing of the clean-cut surface of the wound, various drugs are employed, and have been reported with varying degrees of success. A paste consisting of calcium hydroxide and sterile distilled water has resulted in successful calcification of dentine roofs over the vital amputated stumps of root canal tissue, as reported by Easlick et al.,⁹ and Teuscher and Zander.¹⁶ Brauer¹ advocates a paste of zinc oxide and eugenol, while Grossman⁷ suggests the promotion of pulp repair and stimulation of the deposition of secondary dentine by the addition of dentine dust to a non-irritating cement as follows:—

Zinc Oxide (reagent) ..	60 parts
Staybelite resin	15 parts
Dentine powder	
(autoclaved)	24 parts

This powder is mixed with a liquid consisting of eugenol (50 parts) and oil of cloves (50 parts). Davis⁴ makes a thick paste of zinc oxide (98 per cent) and bismuth subnitrate (2 per cent) with pure oil of cloves, while Waas¹⁷ uses a powder composed of zinc oxide (99 parts) and paraformaldehyde (1 part), with eugenol as the liquid.

The dressing employed must be placed without pressure on the pulp stumps, in order that it may not interfere with the free circulation of the blood. When using the calcium hydroxide paste, it is advisable first to flow a thin layer of paraffin over the paste, which keeps the acid in the zinc cement which is next applied from reacting with the alkaline calcium hydroxide, according to several authorities. However the writer does not deem this step necessary. Teuscher and Zander¹⁶ suggest that the amalgam filling should not rest entirely against the cement base but have some sound dentine upon which to rest. Special pains must be taken to avoid traumatic occlusion on the tooth after the operation. If the cusps are long and pointed, it is advised to

relieve the occlusion by grinding, including the opposing tooth.

According to Kronfeld⁹, bacterial penetration through dentinal tubules is found in a carious tooth even before decalcification has taken place. Thus, even at the moment of pulp exposure by caries, this organ already may have been deeply invaded by bacteria. However, it is found that the inflammatory reaction is confined for some time to the coronal portion of the pulp, and that the pulp tissue in the canals shows no evidence of hyperemia or inflammation, although some bacteria may have penetrated into the canal portion of the pulp. Theoretically then, the chances for survival of the root portion of the pulp are promising, if the more heavily infected coronal portion can be removed adequately.

It is the objective of the vital pulpotomy technique to produce dentine on the surface of the cut wound and to wall off the pulp canals from the cavity. Restarski,¹⁸ among others, has reported better success in this respect with calcium hydroxide than when zinc oxide and eugenol, or dentinoid and eugenol were used as dressings.

Calcium hydroxide is a white, crystalline compound, slightly soluble in water, and highly alkaline with a pH of 12.4. It has been used in medicine as a mild antiseptic, and has been found helpful in the healing of wounds.

In time a continuous layer of odontoblasts covers the surface of the root canal stumps at the side of the amputation. According to Teuscher and Zander,¹⁶ the pulp lays down an amorphous calcified, dentine-like substance across the cut surface of the pulp tissue in contact with the drug. Also the lumen of the canal is often narrowed through deposition of secondary dentine. This bridging over of the cut surface of the pulp by activity of the odontoblastic cells, can be compared to similar action of the epithelial cells in restoring the continuity of

the skin after incision or accidental wound. As yet there appear to be no authentic chemical theories which alone can explain the microscopic repair which is seen. The fact that the root-end is incomplete with a generous blood supply afforded by the open apical foramen, coupled with the embryonic character of the pulp, appears to favour survival and calcification.

In 90 cases treated with calcium hydroxide and 60 cases with calxyl (a drug composed of calcium hydroxide in combination with minute amounts of other salts), Zander¹⁰ reported no apical change in 71 per cent of the cases after two years' observation.

In 1935 Novikoff¹² reported 16 cases of vital pulpotomy in children ranging from 7 to 10 years of age, with only one failure.

Teuscher and Zander¹⁶ have reported favourably in 120 cases of vital pulpotomy in which calcium hydroxide paste was used to cover the amputated portion of the pulp.

Attempts have been made bacteriologically to evaluate the vital pulpotomy technique. At the University of Michigan ten patients were recalled during the year 1940 after the average elapsed time of one year after treatment. The fillings and calcium hydroxide paste were removed and cultures were taken. According to Easlick et al.,⁶ only two of the ten teeth gave positive cultures.

CONCLUSIONS

From this discussion it is apparent that the vital pulpotomy technique is rational for vital exposed pulps in the primary dentition, and in young permanent teeth and proves quite successful and reliable in the hands of operators who are meticulous about the maintenance of asepsis.

Calcium hydroxide is advised as the

pulp-chamber paste, regardless of the fact that the other pulp-chamber dressings also produce secondary calcification and the formation of secondary dentine in successfully treated teeth, although not as rapidly.

The treated tooth should be rechecked with roentgen-ray pictures and with vitality tests for at least two or three years afterwards.

BIBLIOGRAPHY

1. Brauer, J. C. Dentistry for children. Philadelphia, Blackiston, 1939, XI—373p. (p. 181).
2. Codman, W. W. Ossification of the pulp of the teeth. Dent. News Letter, 4:90, Apr. 1851.
3. Cutler, S. P. Ossified pulps. Dent Cosmos, 14: 153, Mar. 1872.
4. Davis, W. C. Operative dentistry. St. Louis, Mosby, 1945. 432p. (p. 335, 353-4).
5. Easlick, K. A. Management of pulp exposure in the mixed dentition. Jour. A.D.A., 30: 179-87, Feb. 1, 1943.
6. Easlick, K. A., Wilbur, H. M., and Crowley, M. C. Partial pulpectomy: a treatment for vital exposure pulps in young permanent teeth. Jour. A.D.A., 28: 365-73, Mar. 1941.
7. Grossman, L. I. Root canal therapy. 2nd ed. Philadelphia, Lea and Febiger, c1946. 354 p. (p. 123-31).
8. Hopewell-Smith, Arthur. Healing processes in the dental pulp. Jour. Br. D. Assoc., 19: 654-60, Sept. 15, 1898.
9. Kronfeld, Rudolf. Histopathology of the teeth and their surrounding structures. 2nd ed. Philadelphia, Lea and Febiger, c1939. 504 p. (p. 122-39).
10. Leonard, N. C. Partial pulp extirpation in children's teeth. Jour. A.D.A., 11: 221-8, Mar. 1924.
11. McCall, J. O. Pulpotomy in modern dentistry. Jour. C.D.A., 3: 177-80, Apr. 1937.
12. Novikoff, J. Report of experiences with pulpotomy at the dental department of the Hebrew orphan asylum, New York City. Dent. Cosmos, 77: 676-84, July, 1935.
13. Restarski, J. S. Preserving vitality of pulp exposed by caries in young children. Ill. Dent. J., 9: 2-7, Jan. 1940.
14. Salzman, J. A. Study of orthodontic and facial changes and effects on dentition attending loss of first molars in five hundred adolescents. Jour. A.D.A., 25: 892-905, June 1938.
15. Sangster, W. A. Preservation of the dental pulp. Dominion Dent. J., 10: 293-5, Aug. 1898.
16. Teuscher, G. W., and Zander, H. A. A preliminary report on pulpotomy. Northwestern Univ. Dent. School Res. Bul., 29: 4-8, Dec. 5, 1938.
17. Waas, C. J. Treatment of the pulp in deciduous teeth. Dent. Outlook, 26: 203-6, May 1939.
18. Zander, H. A., and Law, D. B. Pulp management in fractures of young permanent teeth. Jour. A.D.A., 29: 737-41, May 1942.
19. Zander, H. A. Reaction of the pulp to calcium hydroxide. J. Dent. Res., 18: 373-9, Aug. 1939.

Forgiveness ought to be like a cancelled note—torn in two and burned up so that it can never be shown against one.—H. W. Beecher.

ANNOUNCEMENT***Canadian Dental Association*****REGULATIONS GOVERNING THE AWARD OF STUDENTSHIPS**

1. The Canadian Dental Association through its Research Committee offers "Studentships" to suitable students or graduates who have given distinct evidence of capacity for original research, (or, who have won high distinction in scientific study during their University training), and who desire to prepare themselves further for scientific research by continuing their study in the sciences fundamental to their research fields.

2. They are available on equal terms to men and women, and are awarded to the applicants who are deemed best qualified by the evidence submitted.

3. The age of the applicant and marital status will be important considerations when making an award. Previous training will also be taken into account.

4. Application for a Studentship must be made by the candidate to the Research Committee of the Canadian Dental Association and addressed to this Committee, care of the Secretary, Canadian Dental Association.

5. Application forms are available at the Canadian Dental Association Office on request.

6. An applicant shall submit a transcript of his university record together with a statement from his sponsor who may be the Dean of a Dental School or head of a scientific department within a university, showing that in his estimation, the applicant is worthy of training for scientific dental research.

7. The candidate shall state the institution at which he intends to study and the general line of work to be followed.

8. Applications will be considered at the regular stated meetings of the Research Committee of the Canadian Dental Association in September, January and May.

9. The applicant must state how much financial assistance is required to complete the proposed course of study. Payments will be made on a monthly basis during the period of which a Studentship is held.

10. All apparatus and materials purchased with grants are the property of the Canadian Dental Association, unless otherwise provided for in specific cases.

11. Part-time teaching in a university department or faculty may be considered favorably during the terms of tenure of the Studentship.

12. Interim reports on the student's progress may be requested from the Dean or head of the department in which the student is working. The Canadian Dental Association reserves the right to discontinue the Studentship after reasonable warning is given the student, if progress reports are unsatisfactory. The final report prepared by the student and supported by the Dean or head of the scientific department, indicating in some detail the results accomplished in the study, must be submitted to complete the tenure of the studentship.

Address all communications to:

THE SECRETARY, Canadian Dental Association,
211 Huron St., Toronto, Ont.

*Truth never yet fell dead in the streets; it has such affinity with the soul of man, the seed, however broadcast, will catch somewhere and produce its hundredfold.—
Theodore Parker.*

National Convention of Canadian Dentists

MANOR RICHELIEU, MURRAY BAY, P.Q.

June 20-24

PROGRAM

Sunday, June the 20th

Hours	
1.00.....	Boat arrival
2.00.....	Lunch at the Manoir
2.00 to 6.00.....	Registration in the lobby
	Sports and free time
6.30.....	Dinner
8.00 to 9.00.....	Concert in the lobby
9.00.....	Movies

Monday, June the 21st

9.00.....	Registration in the lobby
9.30 to 11.30.....	Table clinics
11.30 to 1.00.....	Visit to the exhibitors
12.30 to 2.00.....	Lunch
2.15.....	Official opening of the Convention
2.45 to 5.00.....	Essayist, Dr. H. Hillenbrand, Casino "The Future of Dentistry"
	Essayist, Dr. P. Jay, Casino "Dental Caries"
4.30 to 6.00.....	Visit to the exhibitors
6.30 to 8.30.....	Dinner
9.30 to ?	President's Reception and Dance

Tuesday, June the 22nd (Interchangeable with Wednesday)

9.30 to 11.45.....	Group clinics (2nd and 3rd floors)
11.30 to 1.00.....	Visit to the exhibitors
12.30 to 2.00.....	Lunch
2.00.....	Free time, Golf, Fishing, Sport, <i>Films</i>
2.00 to 4.30.....	Scientific films
2.00 to 6.00.....	Visit to the exhibitors
6.30 to 8.30.....	Dinner
7.00 to 10.00.....	Visit to the exhibitors
9.00.....	Cinema

Wednesday, June the 23rd (Interchangeable with Tuesday)

9.30 to 11.45.....	Group Clinics (2nd and 3rd floors)
11.30 to 1.00.....	Visit to the exhibitors
12.30 to 2.00.....	Lunch
2.30 to 4.45.....	Essayist, Dr. Leroy Miner, Casino "Penicillin and Streptomycin"
	Essayist, Dr. G. G. Exner, Casino "Modern Minor Oral Surgery"
4.30 to 6.00.....	Visit to the exhibitors
6.30 to 8.30.....	Dinner
7.00 to 10.00.....	Visit to the exhibitors
9.00.....	Dance at the Casino

Thursday, June the 24th

9.00 to 10.30.....	Essayist, Dr. Kurt H. Thoma, Casino "Comparison of the X-Ray and the Pathological Findings in the Surgical Diseases of the Mouth"
10.30.....	Annual Meeting of the Canadian Dental Association
12.30.....	Lunch at the Manoir before boat departure

National Convention of Canadian Dentists

MANOR RICHELIEU, MURRAY BAY, P.Q. June 20-24

ESSAYISTS

- DR. GEORGE G. EXNER.....London, England
"Modern Minor Oral Surgery"
- DR. H. HILLENBRAND.....Secretary of A.D.A.
"The Future of Dentistry"
- DR. PHILIP JAY.....University of Michigan
"Dental Caries"
- DR. LEROY MINER.....Boston, Mass.
"Penicillin and Streptomycin"
- DR. KURT THOMA.....Harvard University
"Comparison of the X-Ray and the Pathological Findings in the Surgical Diseases of the Mouth"

CLINICIANS

- DR. H. M. CLINE.....Vancouver, B.C.
"Gold Foil Fillings"
- DR. R. J. GODFREY.....University of Toronto
"Scientific Planning and Construction of Removable Partial Dentures"
- DR. PAUL GEOFFRION.....Montreal University
"Orthodontia at the Disposal of all Dentists"
- DR. JAMES MCCUTCHEON.....McGill University
"Full Dentures"
- DR. PRESCOTT MOWRY.....McGill University
"Dental Therapy needed by most Patients"
- DR. J. KREUTZER.....Toronto, Ont.
"Amalgams"
- DR. CHARLES MORGAN Georgetown Medical and Dental Schools, Washington D.C.
"Sulphonamides and Antibiotics"
- DR. H. H. PEARSON.....Montreal, Que.
"Endodontia for the General Practitioner"
- DR. HYMAN PINES.....New York University
"The Porcelain Jacket Crown"
- DR. J. P. TROTIER.....Montreal University
"Gold Inlays"

FILMS

- The Correction of Prognathism:** 16 mm. Coloured.....30 Min.
 DR. JOSEPH E. SCHEEFER, M.D., D.D.S., Chicago
- Pentothal Sodium for the Ambulatory Patient:** 16 mm. Coloured.....45 Min.
 DR. EDMUND ROBERTS, Newark, N.J.
- Immediate Root Resection:** 16 mm. Coloured.....35 Min.
 DR. LOUIS GROSSMAN, Univ. of Pennsylvania
- Functional Immediate Dentures:** 16 mm. Coloured.....40 Min.
 DR. STANLEY G. STANDARD, New York
- Preparations of Abutment Teeth for Full Cast Crown with Interchangeable Facings. Operative Procedure for Practical Upper and Lower Precision Dentures constructed with Precision Attachments:** 16 mm. Coloured.....30 Min.
 DR. DAVID GROSSER, Boston
- Osteotomy of Head and Neck of Condyle for correction of Ankylosis of Temporomandibular Articulation:** 16 mm.....25 Min.
 DR. HARRY SELDIN, New York
- Root Canal Therapy:** 16 mm. Coloured.....40 Min.
 DR. ROBERT KESEL, Chicago
- A New Method of Internal Wire Fixation of Fractures of the Jaw:** 16 mm.....15 Min.
 DRS. FRANK MCDOWELL AND JAMES BARRETT BROWN, St. Louis
- A Simple Technique for Root End Resection:** 16 mm. Coloured.....12 Min.
 DR. ROBERT FISCHER, New York
- Matrices:** 16 mm.....25 Min.
 DR. WALTER J. PELTON, Denver
- The Removal of a Maxillary Cyst:** Coloured.....20 Min.
 DR. ROBERT FISCHER, New York
- Cysts of the Jaw:** Coloured.....15 Min.
 DR. M. J. BOYER, Union City, N.J.

The Forum

METHODS OF CARIES CONTROL

by DR. ROBERT G. KESEL

*Summary of paper in Jour. A.D.A., Feb., 1948
Condensed from F. Review of Cbi. D. Soc.*

There is abundant evidence in the literature that, if we could get the co-operation that is necessary to reduce the carbohydrate intake, we could effectively reduce dental caries.

Sugar consumption in this country is going up simultaneously with the increase in the caries attack rate. Within the next year our population will consume eight and one-half million long tons of sugar, which will average about 140 pounds of sugar per person per year. In other words, we will eat practically our own weight in sugar. That may seem like a tremendous amount, but when you think that three teaspoons of sugar a day, taken daily for a year, will amount to fifteen pounds, and then contemplate what is hidden away in foodstuffs that we consume not realizing that we are getting sugar, as for instance: four to six teaspoons in bottled beverages; seven teaspoons in a small Hershey bar; 15 teaspoons of sugar in a piece of chocolate cake with thick icing; 14 teaspoons in a piece of cherry pie; you can see how we get this tremendous intake so damaging to the tooth tissue. We, as a profession should begin to focus attention on the place where the major part of the responsibility belongs.

You can secure the Michigan diet forms from the State Health Department, Division of Dental Health, Springfield. These menus which are prepared in printed form, limit the carbohydrate intake to about 100 grams a day. There is a series of them so that you can get a diet suitable for all ages

and energy requirements. These carbohydrate starvation diets are well balanced in other respects and, according to Michigan technique, should be employed for two weeks followed by a two weeks' interval in which six slices of wholewheat bread are permitted. At the end of that time, if the lactobacilli counts are down and remain down some sugar is permitted at one meal per day, but only at one meal. At the end of the diet period, which includes six weeks, it is reported that many of those individuals who have reduced their lactobacilli count to the zero point, or to a level which would indicate caries inactivity, can go back on their usual sugar consumption and remain caries inactive from six months to two years, as indicated by lactobacilli counts.

The second method is a more effective program of oral hygiene. Dr. Stephen showed that within a few minutes after the consumption of carbohydrate material there is a drop in hydrogen ion concentration, which means an increased acidity on the tooth surface to a point that will dissolve enamel, and within from twenty minutes to a half hour the maximum acid production has occurred. Within an hour and a half conditions have returned to their original state and the attack of caries is over. So the practice of brushing the teeth the first thing in the morning or last thing at night for caries control, you can see, is not rational. The time to brush teeth is as soon after eating as is possible.

The third method we mentioned as a possibility for caries control was the use of an enzyme poison, something that can be placed in the oral cavity to inactivate these enzymes systems which are not necessarily in the bacterial bodies. Dr. Fosdick has been giving considerable attention to this study. He has been using as the enzyme poison, synthetic vitamin K, known as menadoine, in a chewing gum base, which I am sure would be a very popular method for caries control. This material is chewed immediately after eating, and his preliminary work indicates that it will have a reducing effect on caries activity. However, there is a slight possibility that menadoine may be toxic, although the studies that have been run to date indicate that it is not.

The fourth method is the production of a tooth tissue that would be less soluble in acid. There, of course, the fluorine ion gets major attention, because fluorine has an affinity for calcified tissue. We don't know how effective it will be when it is artificially placed in the drinking water. And so, until some of these studies are completed which are now under way sponsored by the U.S. Public Health Service, by various State Health Departments, I don't believe that we should recommend the widespread use of fluorine in drinking water.

Fluorine also can be topically applied. A 2 per cent solution of sodium fluoride, topically applied, would be helpful in reducing caries activity. The 2 per cent solution seems to be the optimal concentration and applying it about four times produces the maximum result. There should be a very thorough prophylaxis before the fluorine is applied for the first time so this topically applied solution can thoroughly contact the enamel tissue. It isn't necessary to give subsequent prophylaxis if the time interval between the applications isn't too long. The recommendation is about two or three applications a week until the four to six applications have been made. The evi-

dence indicates that it is helpful only to children.

Another way of producing a tooth tissue that will be more resistant to the attack of caries may be the use of silver nitrate. Silver nitrate has been employed for years on the assumption that it will reduce caries activity. There is evidence that it will alter tooth tissue, both the organic and the inorganic portions of the tooth, but there is no satisfactory evidence as regards caries control.

Still another method that is being used to produce an altered tooth tissue is the one being advocated by Gottlieb. In this particular treatment he is recommending a material that will block the organic pathways, those areas through which the carious process seems to penetrate most rapidly. He is doing this by using a 40 per cent zinc chloride solution precipitating it with a 20 per cent potassium ferrocyanide solution. He recommends a wetting agent—Naccanol—to get deeper penetration of the material into the grooves and pits of the teeth. Gottlieb's preliminary work indicates that there will be an arrest of caries activity by this method, but the studies are by no means conclusive and, of course, the results should have confirmation from other quarters before they can be generally accepted.

The fifth method is by the neutralization of the acid before it has an opportunity to attack the enamel. That effect probably could be accomplished in two ways. One by increasing the buffering content of the saliva, which would be a natural method. The other would be by the artificial introduction of something into oral cavity that would have a prolonged alkalizing effect.

A sixth method for caries control is the use of anti-bacterial agents that will reduce the number of organisms associated with caries activity.

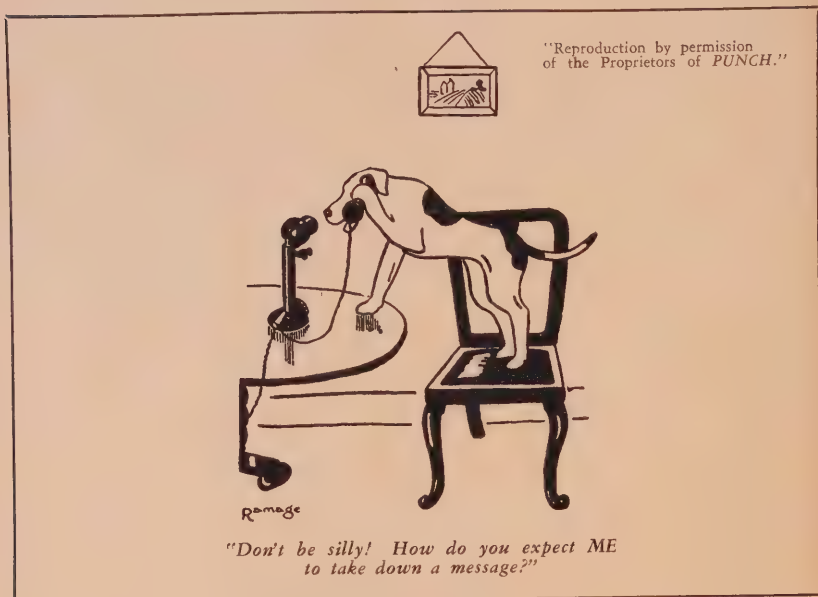
After considerable experimentation we discovered that the salivas from caries immune individuals would produce ammonia at a faster rate than would the salivas from caries suscept-

ible people. With that information we proceeded to compound a dentifrice and a mouth rinse containing ammonium liberating compounds. By experimenting with various ammonium salts and ammonium liberating preparations we determined by in vitro studies that a 5 per cent dibasic ammonium phosphate and a 3 per cent urea combination gives the best results. We have been using these materials now for about three years and we have found that these materials will produce an inhibition or reduction in the number of lactobacilli in saliva, and our preliminary work indicates that there is a reducing effect on dental caries.

There is a possibility that other anti-bacterial agents may control dental caries, for instance, penicillin. Penicillin has been used recently in both laboratory and clinical studies. Penicillin is being employed on a group of dental students and in orphanage children in the Cleveland area. Sufficient work has not been performed as

yet to indicate how effective it is going to be in the clinical control of caries. There is the possibility, of course, of creating penicillin sensitivity in individuals by exposing them continually to small doses and also there is the possibility of developing penicillin resistance in pathogenic organisms. I believe that we must await further clinical and laboratory studies before penicillin is recommended for general use.

There is still another anti-bacterial agent that has been studied here in Chicago which is reported to have merit. It is a solution that was developed by Milton Hanke and his co-workers, known as solution 58. It is an organic mercurial solution and is a good fungicide. Its use is directed toward destroying the filamentous organisms that form the basis of the bacterial plaque and also to reduce acid formation. The studies that have been conducted, however, have not been on a large enough scale for statistically significant conclusions.





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Editorial

DENTISTRY AND WORLD AFFAIRS

A leading dentist in one of our eastern provinces writes that there is a slackening in dental work due chiefly to the completion of D.V.A. services, the general high cost of living and scarcity of ready money, also that old accounts are a much bigger headache than ever before. This is just a sign of which way the wind is blowing. In these columns we have frequently suggested the possibility of such conditions and the probability of them becoming more accentuated as time goes on.

In these days financial experts are finding it difficult or even impossible to forecast the future from a business standpoint so it would be presumptuous for a dental editor to step into a field where "angels fear to tread". All we can hope to do is to call attention to some of the national and even world situations which must influence the practice of dentistry in this country. It would be different if peace were assured but it is far from that. The democracies are facing serious problems for which no solution has been found. The trend in Britain is still towards the left and that country is steadily moving towards a socialistic state. We, ourselves, are faced with the threat of communism on the one hand and on the other by a slow trend towards socialism. The prospect lies before us of greater inflation and today no perfect "hedge" against inflation exists. Inflation of costs and wages is rendering business increasingly expensive to conduct.

The system of capitalism under which we live is under a world-wide challenge. Our standard of living is out of all proportion to the rest of the civilized world. As we have said before, can we on this continent continue to prosper alone?

Many prominent economists agree that Sterling will be devaluated within the next three to five months and that devaluation of the Canadian dollar will likely follow, that is in terms of the American dollar; Sterling by 25 to 30% and the Canadian dollar by 10 to 12%. The effect will be a lower standard of living in Britain and Canada. If this devaluation is to take place, it would be advisable for Canadian dentists to purchase now a reasonable amount of dental supplies and any necessary equipment since between 80 and 90% of our supplies here, in Canada, come from the United States and also most of our dental equipment. With regard to goods coming from Britain, of course, the reverse would be true.

As stated above, devaluation of the Canadian dollar will increase the cost of living to some extent in this country which, in turn, will affect the practice of dentistry. However, dentistry should be able to look to the future with confidence if our people act wisely. A prominent executive says, "Sometime in the future—two, three, five years from now—it will become a case of sell goods or die, and if companies die it will mean death to something else—our free enterprise system." Dentistry has prospered under our "free enterprise system" and has rendered a great service to humanity. Now is the time to prepare for the future by seeing that our office set-up is all that could be desired, see that our auxiliary help is well trained, see that our patients are being educated to the great importance of dental health so that when harder times arrive dental service will be given priority over many so called luxuries which so many people look upon as necessities at the present time and yet which cannot compare in real value to a healthy mouth.

Of utmost importance too is the question of the care of the dental requirements of the children of our land. He is wise who builds up now a strong child clientele. He will not want for patients later on. One of the biggest human challenges of the present time is the care of the broken bodies and sick spirits of the many millions of boys and girls throughout the world but, as a woman from Liberia said, "We read of the plight of the children; we speak of their need; we see pictures of the stricken children; and we are moved to tears—but our tears do not feed one hungry child." Neither do our tears fill one decayed tooth. Fortunately, the children of Canada live in a "land flowing with milk and honey" as compared with many other parts of the world, however, these Canadian children do require much dental attention and it is the duty of the dental profession to work out more adequate plans for their treatment, and in so doing, dentists will be assured of one of the very best means of retaining a large practice later on.

We may not know of the difficulties with which we shall have to deal in future days, but whatever faces us, we must go forward with a strong *faith* that all will be well if we do our best, which reminds us of the words from Tagore—

"Faith is the bird that feels the light
and sings when the dawn is still dark."

M. H. G.

BOOK REVIEW

A Manual of Removable Partial Dentures

designed by R. J. Godfrey, D.D.S.,
M.Sc., Dent., Professor of Prosthodontia,
Faculty of Dentistry, University of Toronto.
Published by University of Toronto Press.
Price \$3.50.

This manual is in the form of a note-book and is intended for use in connection with a course of lectures on classification and design of removable partial dentures. It should be of great assistance to senior students in understanding and retaining the information given in the lectures. The manual itself is well

prepared and the illustrations are very well done but without the lectures it loses most of its benefit to the practitioner who is out of school and who also needs real guidance in this problem (such as Dr. Godfrey could give).

The proper application of the principles involved in tissue bearing and tooth bearing partial dentures is one of the ever present problems of the dental practitioner and it is to be hoped that Dr. Godfrey will expand his manual to include the explanatory lectures so that its great usefulness may extend far beyond the college halls.

KENNETH M. JOHNSON.

CANADIAN DENTAL ASSOCIATION NEWS

(From the Office of the Secretary)

Statistical Data re Dental Personnel in Canada

The annual survey of Canadian Dental Personnel is presented herein, in the form of five tables. These tables have now been presented annually, beginning with the year 1943. By comparison of the tables from year to year, certain trends become significant.

Difficulty is experienced in obtaining accurate data re personnel for earlier years. The Gies Report, published in 1926 by the Carnegie Foundation, sets forth data for each province in Canada giving the number of dentists and the ratio to population. The figures given were collected between the years 1922 and 1925. Attempt has been made to check these data which appear to be fairly accurate with one or two exceptions. The data appearing in this report are as follows:

When these figures are compared with those for January 2, 1948, as given in Table I, some interesting points arise. The population of Canada according to the figures released by the Bureau of Statistics for 1946 is 12,307,000, an increase of approximately one-third over that given for 1924-25. Over all the ratio of dentists to population has fallen from 1:2510 to 1:2735. In other words the increase in the number of dentists has not kept pace with the increase of population during the last two decades. This is an interesting observation at the present time.

Observing the comparative figures for the provinces, Quebec has achieved the largest gain in improving the ratio of dentists to population. In six provinces, namely Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, and British Columbia the ratio

Province	No. of Dentists	Ratio Dentists to Population
Prince Edward Island	24	1:3638
Nova Scotia	177	1:3033
New Brunswick	167	1:2415*
Quebec	609	1:4138
Ontario	1,782	1:1741
Manitoba	237	1:2770
Saskatchewan	236	1:3530
Alberta	202	1:3226
British Columbia	292	1:1920
TOTALS	3,726	1:2510

*In our opinion, the figure given for the number of dentists in New Brunswick is too high, otherwise these figures are approximately correct for the years 1924-25.

has worsened, and in the three provinces of Prince Edward Island, Quebec, and Alberta the ratio has improved. The reasons for this change are not the same in each province.

Comparative population figures as issued by the Bureau of Statistics for the years 1925 and 1946 are as follows:

figures for this year and one year ago. Retirements are higher than for any previous year which is a result of many dentists extending

	1925	1946
Prince Edward Island.....	86,000	94,000
Nova Scotia.....	515,000	612,000
New Brunswick.....	393,000	480,000
Quebec.....	2,549,000	3,630,000
Ontario.....	3,111,000	4,107,000
Manitoba.....	632,000	727,000
Saskatchewan.....	806,000	830,000
Alberta.....	602,000	800,000
British Columbia.....	588,000	1,003,000
TOTALS	9,294,000	12,307,000

TABLE I
Statistical Data re Dental Personnel in Canada
(as reported by Provincial Registrars)
As of January 2nd, 1948

Province	No. of Dentists Reported			During Year of 1947				Total Increase or Decrease	Ratio of Total No. of Dentists per Capita
	Male	Female	Totals	Deaths	Retirements	Removals	Additions	1938	Population
Prince Edward Is.	28	0	28	0	1	0	1	-2	1/3357
Nova Scotia	191	1	192	1	0	2	8	+23	1/3234
New Brunswick	108	0	108	3	1	1	5	-2	1/4546
Quebec	1053	6	1059	16	13	0	47	+185	1/3505
Ontario	2009	23	2032	25	36	45	57	+100	1/2062
Manitoba	250	1	251	3	2	2	9	0	1/2960
Saskatchewan	194	1	195	1	1	1	10	-15	1/4318
Alberta	271	1	272	0	0	3	10	+36	1/3022
British Columbia	461	3	464	7	7	5	28	+102	1/2250
Totals	4565	36	4601	56	61	59	175	+427	1/2735

Population figures used in this table are those issued by the Federal Bureau of Statistics for the year 1947. Figures for increase or decrease as compared to the pre-war year 1938 are given for comparative purposes.

It will be observed that in the case of British Columbia with the rapid increase in population, the ratio of dentists to population has fallen from 1:1920 to 1:2250. Whereas in Alberta with a much lessened increase of population over these years, the ratio has improved from 1:3226 to 1:3022. Saskatchewan, with little change in population, has fewer dentists and consequently a higher number of people per dentist now than in 1925. Similar observations will be apparent respecting the other provinces.

By and large little change has occurred in the statistics for dental personnel between the

their years in practice until the war emergency was over. The total figure of 4601 is one less than the total figure for last year. It is predicted that the present year will not show any sizable increase owing to the fact that there is no graduating class in one of the largest schools. (This is due to the termination of the accelerated plan in this school). In the next following years after 1948 there should occur increases regularly due to the large classes now in attendance in the schools.

Tables II, III, IV, and V are self-explanatory.

TABLE II
Movement of Canadian Dentists During 1947

From:	To:	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Gt. Brit.	U.S.A.	not known
Prince Edward Is.....													
Nova Scotia.....				1		1							
New Brunswick....								1					
Quebec.....													
Ontario.....			2	1			10	5	3	21	1	2	
Manitoba.....						1			1				
Saskatchewan.....						1							
Alberta.....										3			
British Columbia..					1							3	1

TABLE III
Number Practising Specialties by Provinces
(Only those practising the specialty designated full-time enumerated)

	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Totals
Dental Oral Surgeons (Exodontists).....	0	1	0	2	24	4	0	1	2	34
Orthodontists.....	0	1	0	13	20	3	0	2	4	43
Periodontists.....	0	0	0	2	11	1	0	1	3	18
Pedodontists.....	0	0	0	0	1	0	0	0	1	2
Totals.....	0	2	0	17	56	8	0	4	10	97

TABLE IV
Number Employed in Health Services by Provinces

	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Totals
Dental Schools:										
(Teaching Staff) Full-time.....	0	1	0	6	6	0	0	1	0	14
Half-time.....	0	0	0	15	8	0	0	6	0	29
Hospital Service:										
Full-time.....	0	2	0	0	18	1	1	3	1	26
Half-time.....	0	0	0	0	4	0	0	0	1	5
School Dental Service:										
Full-time.....	0	1	1	15	11	1	1	4	9	43
Half-time.....	0	1	2	4	45	4	1	0	0	57
Public Health Service:										
Full-time.....	0	0	2	0	5	1	3	0	0	11
Half-time.....	0	0	0	33	0	0	0	0	0	33

TABLE V

Total Number Employed by Federal Departments

As of January 2, 1948

Department of Veterans Affairs.....	67
Department of National Defence.....	57
Department of National Health & Welfare.....	3
Total.....	127

New Representative for Ontario

The Ontario Board has appointed Dr. H. L. Field, 505 Medical Arts Bldg., Hamilton, as representative on the Board of Governors to replace the late Dr. Giffen.

Appointments

The death of the late Dr. J. F. Giffen left certain vacancies on Committees. The Nominating Committee have given consideration to replacements and made recommendations to which the President has agreed, which are as follows:

Member of Committee on Publications: Dr. E. C. Abo, 86 Bloor St. W., Toronto, Ont.

Member of Council on Dental Education: Dr. Harvey W. Reid, 195 Yonge St., Toronto, Ont.

Member of the Executive Committee: Dr. Harvey W. Reid, 195 Yonge St., Toronto.

Dental Treatment Service for Indians

Certain instances have arisen wherein some misunderstanding is apparent respecting dental service for Indians under the Department of National Health and Welfare.

It is pointed out that:

- (a) No dentist should proceed with such services without authorization by the Department of National Health and Welfare.
- (b) The Canadian Dental Association has not approved of any fee schedule of the Department of National Health and Welfare. Representations have been made to the Department but to date no action has been taken.

Executive Committee Meeting

The Executive Committee met at C.D.A. Headquarters, Toronto on March 1 and 2, 1948. Interim business and arrangements for the Annual Meeting were fully considered at this meeting. A summary of the chief items is reported as follows:

(a) Group Insurance

The Special Committee appointed at the last meeting made an interim report submitting a proposed plan for group life insurance. Direction was given to submit this plan, with any improvements, to the Corporate Members and Members of the Board of Governors, stating that the plan would be considered for adoption at the Annual Meeting.

(b) Proposal for Formation of Association of Public Health Dentists

A proposed constitution for the formation of an Association of Public Health Dentists was presented, together with the request for sanction by the C.D.A. and asking permission to hold an organization meeting during the Annual Meeting at Murray Bay. Recommendation was made that the formation of such an association be endorsed in principle and that arrangements be made to permit an organization meeting at the time of the C.D.A. Convention.

(c) Federation Dentaire Internationale

Correspondence was presented from the Secretary General of the F.D.I. in respect to recognition and financial support of the Federation Dentaire Internationale. Agreement was reached that all possible support should be given to the F.D.I. and that a membership campaign for that body should be undertaken by the Committee on International Relations.

(d) Publication of List of Members

Owing to the high cost of publication it was decided to publish the list biennially, in future, instead of annually. The next issue will be December 1949.

(e) Annual Meetings for 1949-50

Official action was taken to the effect that the 1949 Annual Meeting of the C.D.A. will be held in Saskatoon in the month of June.

Invitation was received from the Ontario Dental Association inviting the C.D.A. to meet with the Ontario Dental Association in Toronto in May 1950. The invitation was accepted.

(f) *Murray Bay Meeting*

A complete report of the arrangements for the Convention to be held June 20-24 next at Murray Bay was presented by the Chairman of the Program Committee. After due consideration of each item the report was approved.

(g) *Activities of Committees*

The progress of the work being per-

formed by each committee was reviewed.

(h) *Official Representative to British Dental Association Meeting*

A cordial invitation was received from the British Dental Association for an official representative of the C.D.A. to attend the Annual Meeting of the B.D.A. to be held in Liverpool, July 8 to 12, next. Decision was made to appoint a representative.

In addition, many matters relating to the routine business of the Association were dealt with during the meeting.

NEWS FROM THE PROVINCES

NOVA SCOTIA

Autumn

Age has mellowed my feelings,
Has softened my point of view,
Has brought a sense of contentment
The days of my youth never knew.

The foe is not nearly so bitter,
My friend is twice the friend,
The storm is not nearly so vicious
And the sun will shine at the end.

Fine days seem to be finer
With less of a wait in between,
Fact is the whole world seems fairer
And carpeted o'er with a sheen.

So age has come gradually smiling,
And that which I dreaded in youth
Has filled me with much satisfaction
And I think I see clearer, the truth.

WM. H. H. BECKWITH, D.D.S., Halifax, N.S.

Dr. Beckwith is now 73 years of age and has retired from active practice, not due to age, but rather to impairment of sight—Editor.

Halifax Dental Society

At the February 5 meeting of this Society Dr. H. M. Eaton presented a short paper, illustrated by slides, on the subject, "Various Aspects of X-Ray Diagnosis". A brief discussion of the principles of radiodontic technique and interpretation followed by an analysis of some of the common errors and fallacies.

Both paper and slides were well presented, and as it is a subject of great interest to all, many questions lead to much discussion.

PRINCE EDWARD ISLAND

School Dental Clinics

School Dental Clinics were conducted only in Charlottetown and Summerside in 1947 in Prince Edward Island, the two largest urban centres. Charlottetown has a permanent clinic, the rooms and equipment being provided by the City Corporation. All supervision and operating expenses are provided by the Health Division, Department of Health and Welfare, although the actual management is under a committee representing the Dental Association, City Corporation and Health Division. The clinic functions part time—two to three mornings a week during the school year.

In Summerside all the dentists in the town (six in 1947) set aside six half days a school year for dental clinic work which is done in their offices, the children being referred by the Public Health Nurse. These clinics are financed equally by the Town Council and Health Division, the dentists providing all materials except anaesthetics. This is a particularly happy arrangement as all the dentists take a personal interest in the work.

Various rural clinics have been conducted in the past, but none have been held for the past two years owing to the difficulty in securing dentists. However, it is hoped that these will be started again this summer. Usually the Women's Institute, Catholic Women's League, or some similar organization in the rural district pays part of the cost, and the organizing of the clinics is done by the Public Health Nurses.

1947 Urban Dental Clinics

- 167 Children received treatment.
- 449 Appointments—2.6 per child.
- 859 Treatments—5 per child.
- 441 Fillings
- 363 Extractions — 257 Deciduous, 106 Permanent.
- 55 Prophylaxis

MONA WILSON

Director Public Health Nursing.

54 Years Continuous Practice in Dentistry

Dr. J. H. Ayers of Charlottetown, Prince Edward Island was born on this Island. His preliminary education was received in the public school and Prince of Wales College, Charlottetown. On May 6, 1892, he was graduated from the Philadelphia Dental College with the degree of D.D.S. As no dental association existed he registered with the provincial government September 16, 1892 and in the following October began to practise which practice was continuous and unbroken for fifty-four years when he retired January 31, 1946.

In 1900, chiefly through his efforts, the members of the dental profession were brought together, the first Provincial Dental Association was organized and then became incorporated by an act in 1902. The late Dr. J. S. Bagnall, was the first President and Dr. J. H. Ayers, Secretary, an office he held for a number of years. Again from 1928 to 1938 he was Secretary and it was during this period that the Dental Act of 1931 was adopted.

For several years he represented the Association on the Dominion Dental Council and attended many meetings of this body.

All during his career he has been keenly interested in elevating the standards of his chosen profession.

Only two of those who organized the Association in 1902 now remain viz. Dr. A. L. Purdy, Alberton, and Dr. Ayers.

Although over 80 years of age, the Doctor maintains a keen interest in his garden which is one of the beauty spots of the community.

D. T. W.

ALBERTA

Edmonton and District Dental Society

The Annual Ladies' Night of this Society held on February 20 at the Macdonald Hotel,

with an attendance of about 200, was voted the most successful yet held. Each lady was presented with a corsage on arrival. The banquet was preceded by a cocktail hour.

The guests at the head table included The Minister of Health, Dr. and Mrs. W. W. Cross; His Worship Mayor Ainlay; the representative of the Edmonton Academy of Medicine, Dr. E. F. Donald and Mrs. Donald; Dean and Mrs. W. S. Hamilton of the Faculty of Dentistry, University of Alberta.

During the banquet the Macdonald hotel orchestra favoured with several selections.

The toast to the Ladies was ably proposed by Dr. J. W. Nielson and responded to by Mrs. W. P. Calhoun, in a pleasing manner.

Frank Herman, well known Master of Ceremonies presented several impersonations and Jack Dennistoun of C. F. R. N. entertained at the piano. During the intermission the younger members of the Idell Davidson School of Dancing presented a floor show which included the Irish Jig, Sailor's Hornpip, Street Tap, Mexicana, Toe Solo and a Soft Shoe tap.

Dr. P. J. Kendal, the Toastmaster, introduced Dr. and Mrs. George Brass, who were married recently and included in his introduction some timely advice.

Music for dancing was supplied by Frank McCleavy and his orchestra.

Dr. H. N. Knight, social convener introduced the artists on the program and Dr. W. Ross Stuart, Sec.-Treas. did the heavy book-keeping.

G. Y. BARNETT

Dr. Hamilton Visits Calgary

On the evening of February 24, Dr. W. Scott Hamilton, Dean of the Faculty of Dentistry, University of Alberta, Edmonton, was guest speaker at the regular staff meeting of the Col. Belcher Hospital, Calgary.

The members of the Calgary Dental Society were the guests of the staff of the Hospital for this event. Dr. Hamilton's subject was, "The Treatment of Fractures." He was introduced by Dr. Gordon MacQueen, Chief Surgeon of the Hospital and by Dr. J. K. Molloy, Superintendent. Dr. Hamilton read a very interesting paper which was implemented with slides and models. Following the paper, an interesting discussion took place.

H. L. F.



SYMPHONY ORCHESTRA, UNIVERSITY OF ALBERTA, EDMONTON

Calgary Dental Society

At the February Meeting of this Society, Dr. J. G. Walker presided in the absence of Dr. C. Lowry.

The guest speaker for the evening, Dr. Jack Neilson, a member of the Faculty of Dentistry at the University of Alberta, gave a very interesting talk on "Practical Periodontia". The interest of all present was very keen, while he presented a paper, slides and a movie film. A lively discussion period followed, which Dr. Neilson capably handled.

H. L. F.

Edmonton Dental Nurses' and Assistants' Association

On February 7 a rummage sale was held by this Association which proved very successful. At the regular meeting, held February 10, \$10.00 was voted to buy phonograph records for the Charles Campbell Hospital and the same amount was donated to the Blind Fund and the European Aid for Children Campaign.

A most enjoyable sleigh ride and chicken supper was held on February 26.

Symphony Orchestra, University of Alberta

In these days, when dental schools are being criticized for their narrow type of education; it is refreshing to view the accompanying photograph, showing the Symphony Orchestra of the University of Alberta, which organization has been in existence for three years. This year and last year public concerts of a very high order were given and were brilliantly conducted by Mr. Ted Lindskoog, a second year dental student, who is a native of Edmonton and who has appeared at performances as a violinist since he was a small boy. He plays other instruments as well.

Three other dental students are members of this Orchestra, Lloyd Kjørven, Hartley Large and John Geddes. Mrs. McEwen, wife of Assistant Professor R. A. McEwen of the Dental Faculty, is also a member of the violin section. The orchestra is made up mostly of students, faculty members, and their wives with six professional musicians to fill in missing parts.

M. H. G.

MANITOBA**Winnipeg Dental Society**

For the guest speaker for March the Winnipeg Dental Society had a highly regarded and much liked medical man who for years was 'the Provincial Psychiatrist of Manitoba, Dr. A. T. Mathers. Dr. Mathers' subject was "The Patient, and Psychology". Any medical man when addressing a group of dentists on such a subject is labouring under a considerable handicap, even the most eminent of psychiatrists, to which group Dr. Mathers belongs. However in spite of this handicap Dr. Mathers paper was very instructive and useful from the dentist's viewpoint and was well received. Dr. P. B. H. Wood offered a hearty vote of appreciation. The meeting was well attended and was presided over by the President, Dr. C. S. McLeod.

A very pleasant evening was spent by members of the Winnipeg Dental Society, not as an organization, as guests for dinner of the Dental Assistants of the city of Winnipeg and adjacent towns. The program following the dinner was very educative on the subject of Town Planning. The Dental Assistants' Association is to be congratulated on the efficiency of its organization.

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**Winnipeg Dental Nurses' and
Assistants' Association**

The regular dinner meeting of this Association took place March 8. The dentists were guests of their assistants. Over seventy were in attendance.

Mr. Eric Thrift was the guest speaker. His subject was on Metropolitan planning and his talk was illustrated by numerous slides.

Miss Margaret Groff thanked the speaker.

Under the supervision of Miss Brown, President, a Leap-Year dance was held on April 9. Proceeds from this dance were in aid of the new Children's Hospital.

D. A. McCULLOCH

ONTARIO**Toronto Academy of Dentistry**

This Academy held its fourth general meeting on March 11. The speaker was Dr. Leroy Johnson of Columbus, Ohio, and his subject was "Dentistry for Children."

Together with associates and statisticians in

state and community surveys, Dr. Johnson found that with the number of dentists practising, the profession could not hope to manage the prevailing need for service. However, it was felt that the incidence of need could be combatted if emphasis was directed in the proper direction.

The problem then, was to educate the dentists to the fact that the large percentage of incidence of need was in the young age groups. Dentistry for children, in an enlarged and revitalized program was the answer.

Dr. Johnson stressed the fact that he was a general practitioner with his practice comprising 70% children and 30% adults. He had two reasons for retaining the adult patients in his practice. 1—To enable him to satisfy a personal desire for artistic effort such as dentures, porcelain jackets, and other restorations. 2—To remind him when confronted with broken down mouths, of professional failure in a dental health service and thereby renew his enthusiasm.

Always when he asks colleagues why they do not do dentistry for children, the answers fall into two general patterns. The first "I cannot make it pay" and the second "I cannot handle the children." Never in all his experience has he ever been told by a dentist that he was not technically capable of doing dentistry for children.

Touching on the economic aspect Dr. Johnson said that he was paid well for the work which he did for children stressing that not all his reward was money but much of it personal satisfaction in having done something worth while. When asked "Doctor, do you charge the same for children as you do for adults," his answer is "Yes, but I should charge more shouldn't I."

In discussing the handling of a child, he said that his office and practice were conducted with special reference to environment, security and painlessness with a psychological approach always prevalent. The pleasing environment is accomplished by furnishings, decorations (colour) personnel and quiet. Dr. Johnson attempts to give the child a sense of security by his friendly voice and attitude adding that he uses his voice tones and qualities to great advantage. Pain is removed from his practice by the use of local anaesthetic injections, preceded by a topical application of 2% monacaine.

Preparation of the child for each new development and complete truthfulness on the part of the dentist play a most important part in enlisting confidence. Co-operation on the part of the child is achieved by praising his appearance after correction and restoration has taken place and comparing the present appearance with that which prevailed before his visit to the dentist.

Dr. Johnson closed his very much appreciated lecture by reiterating that the obligation which we as dentists must assume upon graduation, need not be a burden, but indeed a joy.

R. W. M.

Faculty of Dentistry

The following have been appointed Demonstrators on the Faculty Staff—Dr. R. A. Clappison, Dr. F. D. Dempster, Dr. R. A. Hugill and Dr R. W. Marshall.

Special lecture appointments in surgery have been accorded to—

C. L. Ash, B.Sc., M.D., D. Rad.

S. D. Gordon, M.B., M.S., F.R.C.S.(C): F.A.C.S.

D. M. Tanner, M.B.E., D.D.S., B.Sc. (Dent.)

H. W. Wookey, M.B., F.R.C.S.(Eng.) F.R.C.S.(C).

Dr. E. W. Paul

Many friends and colleagues of Dr. Ed. Paul are glad to learn he has convalesced from a long siege of illness. It is nice to see him about again.

Dr. McLaren to Ottawa Post

Major Hugh R. McLaren, D.D.S., D.D.P.H., dental health officer for Windsor has been appointed assistant chief, dental health division, Department of National Health and Welfare.

He was appointed to the Windsor health staff in 1946 and has conducted a diagnostic, consultative and educational program in dental health in Windsor schools and throughout the city.

Elected to Board Royal College of Dental Surgeons of Ontario

In a recent bi-election Dr. Fred Kennedy, London, was elected to fill the vacancy on this Board resulting from the untimely death of Dr. Frank Giffen.

Attention Class of '28

Mark off your appointment book and plan to be with us at YOUR class reunion at the O.D.A. convention.

THE PLACE: Royal York Hotel. *The Date:* May 17, 1948.

MURRY ROBB, President.

Peterborough and District Health Survey

The Peterborough and District Dental Public Health Committee, composed of layman and dentists, have decided to attempt a complete survey of the dental health of the rural sections of Peterborough county.

The Committee will ask the Red Cross to assist in financing the survey. On the basis of the finding of such a survey the Committee will try to arouse sufficient interest to establish a Health Unit in the county which will include a dental officer.

Renfrew County Dental Society

At the Annual Meeting of this Society held February 25, Dr. Harold Swales of Toronto addressed the assembly. He spoke in the afternoon on "Dentistry for Children" and in the evening on "Dental Public Health".

The following officers were elected:

President,—Dr. A. McPhee of Killaloe.

Sec.-Tres.,—Dr. E. M. Murphy of Cobden.

Ottawa Journal.

Toronto Study Club of Dental Technicians

At the March 10 meeting of this Club Dr. Thomas Cowling, who has been on the staff of the Faculty of Dentistry at Toronto University for the past thirty-five years and is the present Assistant Dean of the Faculty of Dentistry, spoke on the subject, "Metallurgy and Canadian Resources for use in Dental Supplies for the Dental Office and Laboratory". During his address Dr. Cowling told how most of Canada's resources had been found by accident, through the efforts of railway engineers while surveying property for the railways. Gold, Dr. Cowling stated, is to be found in practically all provinces throughout this vast Dominion of ours. Nickel, copper and silver is mined in Ontario. Cobalt,

a casting base for the vitallium, ticonium group, is also found here in large quantities. This metal, due to its physical properties, is used a great deal in dental restorations, as well as for splints and hinges for fractured jaws.

C. BLANDFORD.

Dental Nurses' Alumnae

The Annual Bridge of the Dental Nurses' Alumnae Association of Canada took place at the I.O.D.E. Headquarters on February 3. Over two hundred graduates and their friends turned out to make this function a real success.

The guests were welcomed by the President, Miss Marion Barton and the entertainment convener Miss Barbara Pattison, assisted by the Committee and the Executive. An interesting feature of the evening was the donation of over eighty lucky number prizes, which were drawn by Dr. Roy G. Ellis, Dean of the Faculty of Dentistry and Dr. R. Percival Lowery, President of the Ontario Dental Association. Refreshments were served.

The March meeting was held at the I.O.D.E. Headquarters. The guest speaker of the evening was Dr. D. W. Gullett, Registrar-Secretary of the Royal College of Dental Surgeons of Ontario.

Miss Anne Pollock and Mrs. Keene were appointed to be in charge of the dressings, that are being made by the Alumnae for the Cancer Clinic during 1947-48.

JEAN C. LINDSAY.

Dr. W. B. T. Amy Awarded F.I.C.D.

This further honour has been awarded to Dr. Amy for his untiring efforts in promoting higher standards of dental practice. On behalf of his many friends in Canadian dentistry hearty congratulations are extended for this merited recognition.

Dr. C. H. M. Williams is Guest of Michigan State Society

This successful and popular periodontist has recently attended this association's Convention in Detroit and addressed three of its principal sessions. This is a personal tribute and an acknowledgment of Dr. Williams' ability as a teacher of periodontia.

Mr. A. E. Rowlett, L.D.S., R.C.S. Eng. to Visit Toronto

This well known English dentist, a leading dental administrator in England who has been aptly described as an ambassador of dental good-will, has kindly consented to address a combined session of the Academy of Dentistry, Toronto, and the Ontario Dental Association on Friday, April 30 at 8.15 p.m. in the Theatre of the Royal Ontario Museum, 100 Queen's Park. He will discuss the current situation respecting dentistry in Great Britain. Mr. Rowlett is an able speaker and has had a long and intimate association with the dental administrators not only in his native land, but throughout the British Commonwealth.

Dean Ellis at Boston April 7

Dean R. G. Ellis of Toronto has returned from an appearance before the Metropolitan Dental Society in Boston, Mass.

Dr. Wallace Graham Visits Northern Ontario in April

In response to repeated and insistent requests received from dental groups in Northern Ontario arrangements have been completed for a series of lectures to be given by J. Wallace Graham, M.D.: D.D.S., Tor.; M.R.C.P., Lond.; F.R.C.P. (C). Dr. Graham is Associate Professor of Medicine in the Faculty of Dentistry, and Senior Demonstrator in Medicine, Faculty of Medicine, University of Toronto. The lectures are sponsored by the Faculty of Dentistry, Toronto in co-operation with the Royal College of Dental Surgeons of Ontario and will be given in April.

The itinerary includes visits to the North Temiskaming Dental Society, Kirkland Lake; The North Bay Dental Society; the Sault Ste. Marie Dental Society; and the Thunder Bay Dental Association, at Fort William.

As the attendance at these meetings includes medical as well as dental practitioners, Dr. Graham has very aptly chosen as topics for discussion, "Heart Diseases and Their Relationship to Dentistry," and "Diagnosis and Treatment of Rheumatic Diseases with Special reference to Infection." Following each presentation opportunity is provided for a question period when many medico-dental problems will receive consideration.

Dr. George Barrett Elected President of Ottawa Dental Society

Three prominent Ottawa dentists were speakers at the regular monthly meeting of the Ottawa Dental Society held on March 8 at the Chateau Laurier Hotel when officers for the next term were elected. The meeting brought to a close the schedule for the 1947-48 season. Members will commence the new season next November. President Dr. E. S. Macartney occupied the chair.

Dr. S. W. Bradley addressed the members on the correction of irregularities which require special attention while Dr. I. W. Hamil-

ton spoke on the correct time to begin treatment. Dr. Braithwaite Dixon told of the methods of preventing malocclusions.

The new slate of officers installed for the coming year are:— president, Dr. George Barrett; vice-president, Dr. John French; past president, Dr. Elwin Macartney; secretary, Dr. Allan Stinson; directors, Doctors A. Coûture, F. Gollop, Charles Wood, and Carol Laurin, W. A. Wolfe, W. Richards and Harold Beach.

Owen Sound

Dr. R. L. Twible is invited to be the guest of this Society on April 21.

EMPIRE NEWS

GREAT BRITAIN

National Health Service Act—20 Questions and the British Dental Association Answers

1. Does the Association object to the establishment of a National Health Service?

Answer . . The Association is in favour of such a service and has, for years, advocated the establishment of a service providing dentistry for all those who need it. The Association objects only to the Comprehensive Dental Service as it has been designed by the present Minister of Health.

2. What are the objections of the Association to the proposed Service?

Answer . . The Association objects to the proposed Service because it will destroy the present patient-practitioner relationship, will limit the "clinical freedom" of dentist, put a premium on "utility" dentistry and offer no encouragement to the dentist of exceptional ability and enthusiasm.

3. What is "Clinical Freedom"?

Answer . . The time honoured right of a dentist to decide with his patient the nature and extent of the necessary treatment and to proceed with the treatment without the interference of a State-appointed body.

4. Does the Minister offer "Clinical Freedom" in the proposed Service?

Answer . . The Minister insists that a large proportion of all normal dental treatment

must be subject to prior approval by a third party and that all patients may be required, before and after treatment, to submit to examination by State-appointed bodies.

5. How does "Clinical Freedom" affect the patient?

Answer . . Under the proposed Service, with its limitation of "Clinical Freedom," the dentist will be encouraged to advise lines of treatment which are likely to be acceptable to the Dental Estimates Board and the Dental Officers of the Ministry, rather than enter into lengthy correspondence or to subject his patient to irritating delays.

6. What is the proposed method of remuneration?

Answer . . The Minister insists on payment of a fixed fee for each item of treatment, i.e. the same fee to be paid to every dentist for the same operation, irrespective of any special skill employed or the amount of time involved.

7. What is the objection to this method?

Answer . . The proposed fixed scale can only result in a standardized service for all, for the good dentist will be unable to afford to maintain his higher standards of service at his own expense. The most careful and conscientious dentist will earn the least. The Association maintains that this method will put a premium on hurried and shoddy work.

8. Has the Association suggested an alternative?

Answer . . The Association has asked for a system of remuneration by "Grant-in-Aid." This means that the Government grant for each item of treatment would be available to the patient whether he attends a practitioner willing to work at the standard scale fee, or a practitioner whose standards, whose skill, whose experience or whose amenities enable him to provide "Something better than utility dentistry," and therefore entitle him to receive a higher reward for his work. This system is in successful operation in the Social Security schemes in France, Belgium and Norway, and provision for it has recently been made in the Health Service for Northern Ireland.

9. What did the Minister say to this?

Answer . . The Minister refused to consider any such method of remuneration.

10. Does the Act really provide a "Free Dental Service" for the patient?

Answer . . No—the patient will pay for the service for the rest of his life by direct contributions, rates and taxes, whether or not he ever needs dental treatment.

11. What will be the effect of the Act upon the patient who remains a private patient?

Answer . . His gain will be that he will continue to receive the treatment he desires, unhampered by red tape or restrictive Regulations.

His loss will be that part of his weekly contribution allocated to dental treatment—about 3d. weekly.

12. Is there security for a dentist under these proposals?

Answer . . No! The Minister has power under Section 43 of the Act to dispense with any requirements of the Regulations dealing with the General Dental Service.

13. What does the Association think about the "Right of Appeal" clause of the Act?

Answer . . Under the Act, power is given to a Tribunal to direct the removal of a practitioner's name from the list of the employer body, which would virtually amount to disqualification from practice. From this decision there is no appeal except to the Minister.

The Association maintains, in consequence, that a practitioner should have

the right of final appeal to the High Court.

14. What are the Minister's intentions regarding Health Centres?

Answer . . Full-time salaried service in Health Centres as soon as they can be built.

15. What does the Association think of the Minister's plea to come into the Service and give it a trial, and of his promise then to alter the conditions of service in the light of experience?

Answer . . Conditions can just as easily be degraded as improved.

16. What does the Association advise a member to do?

Answer . . The Representative Board recommends all members of the Association to exercise their right under the Act to refuse to enter the Service until the Act and its Regulations are amended so as to include the principles advocated by the Association.

17. What does this imply?

Answer . . No member should apply to be included on the list of any Executive Council.

18. What harm is there in getting "on the list" but not accepting any Health Service patients?

Answer . . Once a dentist has signed the application form, which would be sent to him, he thereby signs a definite contract to treat patients under the terms and conditions in operation in the area.

19. What might be the effect of this?

Answer . . In the first place, that the Minister of Health would be in a position to tell Parliament that stated number of dentists had agreed to work his Service. Secondly, the reasonable conclusion by the public that any practitioner signing such a contract *completely* approved the terms and conditions of the National Health Service.

20. Will the Association continue its efforts to obtain amendments to the Act and its Regulations?

Answer . . The British Dental Association is prepared, in the public interest, to maintain, with no sense of commitment, its contact and discussions with the Minister of Health in order that amendments may be obtained to the Health Service

Act 1946 and its Regulations, which would ensure a satisfactory dental service for the public.

38,534 Doctors Disapprove

The Council of the B.M.A. met on February 18 to receive the results of the plebiscite and to discuss the future action.

Of the 51,042 medical men in Britain to whom voting papers were sent, 43,013 have returned valid papers—an 84% poll. Of the 43,013 voting, 38,534—or 90%—expressed disapproval of the Act in its present form. Of the general practitioners 17,626 expressed disapproval, and 17,037 voted against accepting service.

If nothing happens to change the views of these men between now and July 5, Mr. Bevan will have at his disposal 3,560 general practitioners and 971 consultants and specialists to operate the National Health Service Act designed for a population of 47,000,000.

Of the 762 medical men and women working wholetime in Government service, 634 disapproved of the Act, and only 127 expressed their approval.

A Denture Repair Shop Case

A case with some unusual features was decided at the Aldershot Magistrates' Court on January 5, when Ivor Roy Ellis, Trading at 3, Queen's Road, as the Denture Repair Service, was fined £5, with £5 5s. costs, for practising dentistry when unregistered.

It appeared from the evidence that the patient, Miss Webster went to the defendant who told her he could not take a tooth out for her. She then went to a dentist, had the tooth, an incisor, extracted, and returned to Mr. Ellis. He told her it was unlawful for him to touch her mouth, and explained the method of taking an impression. She took the impression herself and the defendant did not touch her mouth. She returned the next day, when the denture was ready, and inserted it in her mouth herself. In cross-examination the defendant agreed that he had made dentures in a similar way for a number of women who had taken the impressions themselves. Evidence was given that the defendant had served in the Army Dental Corps for 16 or 17 years. The prosecution was undertaken by the Dental Board of the United Kingdom—*Br. D. Jour.*

Advice to Young Dentists

It is reported in the Journal of the Irish Dental Association for Jan., 1948, that Sir Ernest Graham-Little, the physician M.P. for London University, told students of the Royal Dental Hospital in London:—

"If I were a young professional man, enjoying good health and having received an adequate training, I should most certainly make the effort to leave this country while the going is good."

He said that there was at present something of a lull in medical matters preceding the storm which must be expected to break in the coming months.

The National Health Services Act, 1946, was a glaring magnification of the power of the Executive and in the consequent curtailment of individual freedoms.

AUSTRALIA

Australia has Empire's Largest Dental Faculty

by Mary Evans-Jones in Dental Record

When a child in Australia loses a first tooth, it is the custom for the parents to say: "We will put it in a glass of water, and when you wake up in the morning, see what the fairies have brought you." Next morning, of course, the tooth has gone and a silver coin lies underneath the glass.

But what about the kiddies who are troubled even by the first teeth, and have to go to a dentist to have them out? The staff of the Dental Hospital in Sydney hated to keep the fairies away, but they knew it was considered unwise to let any child carry off a tooth that was slightly decayed. This was the solution: they adopted the idea of handing out a tiny false tooth to each child who had had a tooth extracted, and the children go away cheerfully with their souvenirs. A silver coin found under a false tooth stills buys ice-cream.

This little bit of thoughtfulness is symptomatic of the atmosphere of Sydney's Dental Hospital, where toys are provided in the waiting-rooms for children to keep their minds off the more fearsome aspects of a visit to the dentist. In the past, too many children came to regard the dentist as a kind of ogre long before they had acquired their second set of teeth. Dental Hospital author-

ities reason this way: the more confidence is developed in childhood, the less the likelihood of teeth decaying later on as a result of staying away from the dentist too long.

The Dental Hospital of Sydney has a two-way function; it was established by the New South Wales Government to treat those unable to afford the usual dentists' fees and to provide clinical facilities for the teaching of university students.

Sydney in 1947 had the largest dental faculty in the British Empire; there were 750 students spread over a course which occupies four years, compared with an average 250 students in pre-war years.

Last year 25,000 child and adult patients went through the hospital, representing 200,000 individual treatments. In the X-Ray Department alone, 80,000 exposures for examinations of patients' teeth were made.

The work done at the Dental Hospital ranges from routine dental treatment to oral surgery, fractured jaws, and plastic work on jaws.

Besides special department catering for children, the hospital provides dental treatment for pre-school nurseries in the suburban areas. The Institute of Dental Research attached to the Hospital, constantly investigates problems of dental decay and improved diet.

GENERAL NEWS

Dental Internship Toronto General Hospital

A dental internship in the above hospital is available from July 1, 1948 to June 30, 1949.

The dental intern resides in the hospital and receives no financial remuneration; clothes, laundry and board are provided.

The hospital is a teaching institution and therefore the internship is a rotating one. The intern receives a broad training in oral diagnosis and the medical sciences as they are associated with oral disease.

Application may be made to:

DR. DOUGLAS TANNER, M.B.E.,
Director of Dental Services,
Toronto General Hospital,
Toronto 2, Ont.

President Truman Asks Health Program

"Over the past twelve years we have erected a sound framework of social security legislation. Many millions of our citizens are now protected against the loss of income which can come with unemployment, old-age, or the death of wage-earners. Yet our system has gaps and inconsistencies; it is only half-finished. We should now extend unemployment compensation, old-age benefits and survivors' benefits to millions who are not now protected. We should also raise the level of benefits.

"The greatest gap in our social security structure is the lack of adequate provisions for the nation's health. We are rightly proud

of the high standards of medical care we know how to provide in the United States. The fact is, however, that most of our people cannot afford to pay for the care they need. I have often and strongly urged that this condition demands a national health program. The heart of the program must be a national system of payment for medical care based on well-trying insurance principles. This great nation cannot afford to allow its citizens to suffer needlessly from the lack of proper medical care.

"Our ultimate aim must be a comprehensive insurance system to protect all our people equally against insecurity and ill-health."—*New York Times* 97:4 January 8, 1948 per Public Health Economics.

Physical Sciences

A series of lecture-demonstrations for high school honour pupils, entitled "Applications of the Physical Sciences", inaugurated at the University of Cincinnati in 1935 and temporarily suspended during the war, was resumed on February 21.

This year, nominations of honour students were invited from some 150 schools within 50 miles of Cincinnati, and an audience of 1,200 was expected. The 1948 topics include "Aspects of Television", "Faster Than Sound", "Metals Inside Out", "Basic Principles of Atomic Energy", and "The Atomic Pile in the Sun". The meetings were held each Saturday through March 20 on the campus.

Special Radio Broadcast

The American Dental Association joined the American Medical Association in sponsoring a special program on fluorine broadcast over the National Broadcasting Company network on Saturday afternoon, March 20.

New England Dental Journal

The New England states of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont have combined to publish a new dental Journal known as the New England Dental Journal. The first issue appeared in January of this year and it is to appear quarterly. The dentists of Canada wish to congratulate those responsible for this very successful first issue and wish for this publication a brilliant success in the future.

Seek Social Security Plan for U. S. A. Dentists

The Committee on Legislation of the American Dental Association has requested that dentists be included in preliminary drafts of Congressional bills to extend the coverage of old age and survivors' insurance.

Plans to revise present federal laws to include self-employed persons in the government's social security program are now being considered by an advisory committee of the Senate.

Cancer

The American Cancer Society is sponsoring a new bimonthly journal, *Cancer*. Every phase of the cancer problem will be covered, with major emphasis on clinical aspects. In addition, the journal will publish a complete current bibliography of the world's cancer literature and comprehensive abstracts of significant articles.

A.M.A. Reports \$170,000 Deficit

The American Medical Association reported a deficit estimated at approximately \$170,495 for the 1947 calendar year.

Even with reductions that have been made in a number of budgets, the budgets for 1948 exceed apparent income by over \$100,000.

Not only have wages increased, both in the factory and in the office, but, on account of additional activities of the Association, more employees have been necessary.

It therefore remains for the Association either to find some other method of increasing revenue or to curtail activities.

Omaha Dental Society Develops Dental Assistant's Course

The Omaha District Dental Society has developed a course of study for dental assistants in the Omaha, Neb., area with the aim of improving their education and standing.

The course, which takes a year to complete in its entirety, covers dental office management, reception and preparation of the patient, dental anatomy, physiology and pathology, sterilization and bacteriology, local and general anaesthesia, oral surgery, dental roentgenology, pedodontics, orthodontics, pharmacology, oral hygiene, diet and nutrition, crown, bridge and full denture prosthesis, laboratory technique on removable partial dentures, first aid, carvings and drawings and dental terminology.

Classes meet weekly for two hour sessions. It is hoped that upon completion of the entire course, the students will be better qualified to pass the examination for certification for dental assistants when the Nebraska State Dental Association is next in session.—*Journal of A.D.A.*

IN MEMORIAM

C. W. H. Skinner, of Regina, Sask., died March 14. He was graduated from the Northwestern Dental College in Chicago in 1913.

Upon graduation, he came to Moose Jaw where he became associated with Dr. W. W. Irwin. In approximately 1928 he moved to Regina, where he practised ever since.

Dr. Skinner was a former member of the Knights of Pythias, a keen hunter and a horseman. He had collected several prizes with his horses at the various Horse Shows in Western Canada. Following the large funeral in Regina, his body was shipped to Nova Scotia for burial.

IN MEMORIAM

Weston A. Price of Santa Monica, California, aged 77, died recently. Dr. Price, a former Canadian, practised for many years in Cleveland, Ohio, where he was internationally known for his research work in the field of nutrition as related to dental health.

He travelled approximately one hundred thousand miles visiting primitive people in all parts of the world in order to gather information for his reports on eating habits and their effect on tooth decay.

Recently he gave his collection of slides, film strips and photographs, accumulated over many years, to the American Academy of Applied Nutrition in Los Angeles.

Dr. Price will be greatly missed by the dentists of Canada who held him in high respect.

Alexander Hildane Allen, of Toronto, Ontario, aged 86, died suddenly March 10. He was graduated from the Royal College of Dental Surgeons of Ontario in 1887 and later took a post-graduate course in New York.

He began practice in Orangeville, later moved to Paisley and in 1919 moved to Peterborough where he remained until 1940 at which time he came to Toronto.

He was a member of High Park United Church and was also an enthusiastic lawn bowler.

Dr. Allen is survived by his widow. His first wife predeceased him several years ago. There are four daughters, one son, two brothers and two sisters.

F. J. Forristal, of Sydney, N.S. died March 9. He was graduated from the Faculty of Dentistry, Dalhousie University in 1936 and since then has practised in Sydney.

While at Dalhousie, he held the Maritime intercollegiate lightweight boxing title. He was active in community affairs and took a leading part in the development of athletics generally. He coached the Community House basketball team for years.

He was a veteran of World War Two.

Dr. Forristal is survived by his widow, his mother and one brother.

Ernest Frederick Armstrong, of Cobalt, Ontario died on March 14 in his seventy-first year.

He was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1904 and immediately began practice in Cobalt where he continued until he retired in 1946.

He was always actively interested in Community and Public affairs. He was mayor for three terms in 1914, 1922 and 1925. In 1925-26 he represented his constituency in the House of Commons.

Dr. Armstrong also had a noteworthy military career. In 1900 he was a Lieutenant in the 31st Battalion. In the First Great War during the years 1915-1919 he was a Lt. Col. and officer Commanding the 159th Battalion B.E.F. serving in France, Belgium and Germany as a combatant.

He was a life member of the Masonic Order and the Odd Fellows and in 1928 became a member of Cobalt Kiwanis Club.

He is survived by his widow and three sons. A fourth son was killed in action in France, September 1944.

Frederick Alexander Walters, of Forest, Ontario died on March 14 at the age of 75.

He had been retired from practice for a number of years.

Frederick A. Taylor, of Moncton, New Brunswick, died on February 29, following a brief illness. He was one of the oldest practising dentists in this province, having been active in his profession for 56 years.

He took a keen interest in sports and was an ardent follower of harness-racing. He was a hockey fan and was chairman of the Moncton Boxing and Wrestling Commission and also a skilful angler. For a number of years he was a member of the Executive of the New Brunswick Fish and Game Association.

He was a past president of the Moncton Dental Society and prominent in the provincial organization.

He was past master of Keith Lodge A.F. and A.M., also a Rotarian.

Dr. Taylor is survived by his widow.

Le Journal

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La défaillance cardiaque en anesthésie locale

par EMILE GUILBERT, B.A., D.D.S., Montréal

Malgré toutes les précautions prises au cours d'une anesthésie locale, il nous arrive parfois d'être en face d'un patient dont les réactions sont différentes de celles attendues. Admettons que nous avons employé un bon anesthésique, un agent adéquat pour la fin désirée, un anesthésique local pour une opération mineure, et que, dès le début de la séance, notre patient tombe en défaillance, nous sommes en présence d'un accident occasionnel, qu'il faut tâcher de réparer au plus tôt.

Nous savons que chez l'individu normal, en bonne santé, le sang prend vingt-sept secondes pour circuler dans l'organisme et revenir à son point de départ. Nous savons également que ce sang est propulsé par le coeur dont le rythme régulier et autonome est l'indice du bon fonctionnement de la machine humaine.

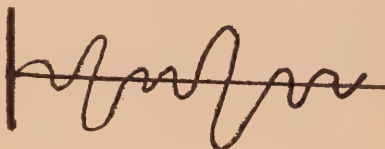
Dans un organisme en défaillance, la machine fonctionne mal. Nous observons presque toujours des troubles respiratoires, qui semblent prédisposer aux troubles cardiaques, ou qui en sont un signe avertisseur; le coeur n'a plus son rythme régulier, le pouls devient rapide et saccadé, la pression sanguine tombe d'un fort pourcentage.

Si nous représentons par une sinusoïde les battements du coeur dans son rythme

régulier, nous aurons un cardiogramme comme celui-ci:



Dans un coeur défaillant, cette courbe deviendrait anormale, saccadée, avec une élongation diminuée, et avec une fréquence augmentée:



Le principal prénomène de la défaillance est autre. Si la circulation est complétée dans l'organisme en un laps de temps de vingt-sept secondes, les liquides anesthésiques injectés atteignent le coeur et le système nerveux central en un temps beaucoup plus court.

C'est l'influence du grand sympathique sur tout le réseau nerveux, qui entre en action. Cette influence n'est pas exercée sur le sang lui-même, mais sur les fibres des muscles involontaires situés dans les vaisseaux périphériques. Les fibres de ces muscles lisses sont innervées par le grand sympathique et, suivant la théorie admise, l'agent anesthésique n'agit pas seulement sur les artères des muscles lisses, mais aussi sur les terminaisons périphériques du sympathique, qui contrôle la contraction des muscles involontaires. Il en résulte une vaso-constriction des minuscules canaux qui alimentent le cerveau. Comme la quantité de sang arrivant aux petits vaisseaux situés à la périphérie, particulièrement au cerveau, n'est pas assez grande, il y a anémie locale: par suite, tout l'organisme tombe en défaillance.

Nous étudierons maintenant les principales causes susceptibles de produire cette déchéance de l'organisme. Nous étudierons le choc psychique, le choc opératoire, la solution anesthésique, l'idiosyncrasie.

Le psychisme est un élément du sub-conscient, mal défini, mais dont les répercussions variées, légères ou graves, exercent une influence sur le bon fonctionnement de l'économie.

Le choc psychique est produit par des impressions anormales qui sont transmises au centre nerveux et au cerveau, produisant un état de syncope. Une anesthésie locale réussie élimine la douleur, mais n'élimine pas les impressions psychiques. C'est pourquoi l'opérateur devrait toujours être sur ses gardes, usant de diplomatie et de tact, et cherchant à gagner la confiance du patient avant de pratiquer une injection.

Le choc psychique produit par des troubles psychiques, tels que la peur, l'inquiétude, l'hypersensibilité et la surexcitation, est causé par des impulsions nerveuses, qui tirent leur origine dans les centres hautement spécialisés du cerveau et exercent une action déprimante et anémique sur les centres médullaires. Chez l'individu de grande nervosité, une opération exécutée sous anesthésie régionale, n'implique pas nécessairement absence de

douleur. C'est que le patient, affranchi de la souffrance physique, subit une tension mentale plus déprimante que la douleur elle-même, de sorte que l'endroit d'exécution d'une opération sous anesthésie locale doit être pris en considération. Par exemple, une opération du cerveau, l'ablation d'une tumeur ou la résection de l'os du maxillaire, sont des opérations dont l'effet psychique exerce une action déprimante sur l'organisme.

Egalement, chez le patient qui rêve au dentiste trois jours avant une intervention, ou qui fait les cent pas à la porte, la peur engendre par l'intermédiaire du grand sympathique, l'accumulation d'adrénaline dans le sang, laquelle est sécrétée par les glandes surrénales. Dans les solutions anesthésiques locales, nous retrouvons l'adrénaline, sous forme d'épinéphrine (produit synthétique). Alors, le dentiste injecte un produit dont le sang est saturé; et quand on connaît l'effet puissant de l'épinéphrine par son pouvoir constricteur dans l'organisme, on s'explique facilement les troubles, qui surviennent chez les gens nerveux, à la suite d'injections de procaine et épinéphrine (employées régulièrement dans la pratique courante.). Par suite de ces conséquences, le côté psychique est intimement lié au choc opératoire.

Le choc opératoire, appelé aussi par certains auteurs choc traumatique ou choc circulatoire, est défini par Winter comme étant une disproportion marquée entre le volume de sang circulant dans les vaisseaux et la capacité de fonctionnement du système circulatoire. C'est, en d'autres termes, une dépression générale accompagnée par une chute de pression artérielle causée par l'épuisement des centres vasomoteurs. Cette disproportion peut résulter d'une perte de sang, par suite d'hémorragie. Ce choc traumatique est caractérisé par une atonie capillaire avec augmentation de perméabilité des petits vaisseaux périphériques; il s'ensuit que le plasma sanguin s'écoule à travers les parois des capillaires pour s'infiltrer dans les espaces du tissu extravasculaire.

Le volume du sang se trouve ainsi grandement diminué, causant une hémor-

concentration et une augmentation dans le nombre des cellules rouges du sang par unité de volume. Un mécanisme de compensation intervient pour contrebalancer la diminution en volume du liquide circulatoire: c'est le phénomène de la vaso-constriction, dont nous parlerons plus loin dans nos notes sur l'Adrénaline.

Les vaisseaux périphériques sont relativement exsangues et les organes vitaux souffrent d'un manque d'oxygène. La pression veineuse diminue pour cause, manque du liquide circulaire; et une quantité insuffisante de sang est retournée au coeur pour le remplir adéquatement. Dans son rythme régulier, le coeur ne trouve pas assez de sang pour alimenter tous les canaux vasculaires, alors la pression dans l'aorte tombe. Les nerfs accélérateurs se trouvent stimulés, augmentant le taux d'impulsion au coeur.

La dépression générale qui prévaut dans un cas de syncope ou plus simplement de défaillance, est due en grande partie à un manque d'abolition des réflexes, accompagnée d'une surexcitation des nerfs sensitifs afférents et des centres nerveux, suivie d'une chute de pression artérielle: la gravité du choc opératoire, occasionnée par des manipulations chirurgicales déficientes—telles la laceration de tissu insuffisamment anesthésié, par des perturbations psychiques ou par l'agent anesthésique, est en relation de l'intensité de l'influx nerveux afférent et du pourcentage d'abaissement de la pression.

Nous devons nous souvenir que les cellules des tissus sont entourées d'une membrane semi-perméable, leur conservant une certaine densité. Par membrane semi-perméable, nous voulons dire une membrane qui est perméable à l'eau, mais ne laissant pas passer les autres sels contenus dans la cellule. Supposons que nous injectons de l'eau distillée dans un tissu. Les sels contenus dans les cellules ne peuvent pas traverser dans le liquide injecté. Cependant, il existera une plus grande pression osmotique à l'extérieur qu'à l'intérieur de la cellule. Le résultat sera qu'en raison de la différence de cette pression, quelque peu de l'eau injectée pénétrera dans la cellule. Celle-ci se gon-

flera de cet apport étranger. C'est que l'eau injectée est une solution hypotonique, ou déficiente en sels, par rapport au contenu de la cellule.

Si maintenant nous injectons une solution dont le pourcentage de concentration excède celui de la cellule, l'eau de la cellule passera dans le liquide injecté, détruisant l'équilibre cellulaire. La cellule se ratatinera, produisant une condition, qui est appelée plasmolyse. La solution que nous avons injectée est hypertonique. L'un et l'autre de ces phénomènes—hypertonicité et hypotonocité—, sont dommageables à la cellule et diminuent d'autant la résistance et la vitalité de l'individu. Si nous voulons nous placer dans les meilleures conditions possibles, il faudrait donc injecter une solution isotonique, i.e., de même concentration, que le contenu de la cellule. Nous devons nous rappeler sans cesse l'influence physiologique de l'osmose qui sert à entretenir l'organisme, par transport d'éléments nutritifs du sang aux cellules, par distribution des sécrétions glandulaires, par phénomènes d'absorption et d'élimination.

L'agent anesthésique joue un rôle important dans la bonne anesthésie. La défaillance occasionnée par les injections dépendent de plusieurs facteurs tant de la part du patient que de l'opérateur; parmi les principaux, nous citerons:

- 1—l'administration d'une trop forte dose;
- 2—la susceptibilité du patient;
- 3—la toxicité de l'anesthésique;
- 4—les obstacles à la respiration;
- 5—l'idiosyncrasie.

En anesthésie locale dentaire, le principal anesthésique employé, est la procaine, alliée à un vaso-constricteur—l'épinéphrine. La plupart des troubles proviennent de l'épinéphrine et de sa toxicité en rapport avec:

- 1—le pourcentage de la solution injectée.
- 2—la quantité de la solution injectée.
- 3—la rapidité de l'injection.
- 4—le taux d'absorption.

Le choc produit par une dose trop forte d'anesthésique, varie suivant l'anesthésique employé, suivant l'individu, et suivant le mode d'administration.

Les symptômes secondaires qui suivent

l'administration de l'anesthésie ne dépend pas de la quantité employée, mais de la toxicité, de la rapidité d'injection, et des conditions physiques du patient, de la susceptibilité de l'individu.

Disons maintenant quelques mots sur l'Adrénaline.

L'Adrénaline est le nom adopté par la Pharmacopée des Etats-Unis pour désigner le principe actif de la portion médullaire de la glande surrénale. Les deux glandes surrénales sont situées dans la région épigastrique, chacune d'elles reposant sur la portion supérieure du rein.

Les capsules surrénales sont des glandes sans conduit déchargeant les sécrétions internes de leur portion médullaire, directement dans le courant sanguin. Leur fonction et sécrétion sont essentielles à la vie, car si elles sont enlevées, l'animal meurt en quelques heures, et cette mort est précédée d'une chute rapide de la pression du sang. Leur produit de sécrétion porte le nom d'Adrénaline; lorsque cette substance est fabriquée synthétiquement, elle est appelée épinéphrine.

Injectée dans les tissus, en si petite quantité que ce soit, l'épinéphrine a un pouvoir vaso-constricteur très grand, élevant temporairement la pression du sang. Cette action n'est pas exercée sur le sang lui-même mais sur les fibres des muscles involontaires, qui tapissent les vaisseaux, lesquels vaisseaux sont innervés par le sympathique dont les terminaisons nerveuses périphériques contrôlent la contraction des muscles, produisant une anémie locale.

L'action de l'épinéphrine est si grande que, lorsqu'une quantité est injectée dans la région des petites artères,—v.g. artères de 2 millimètres—elle causera une obturation complète de la lumière du vaisseau, de sorte qu'une opération mineure peut être exécutée dans cette région sans hémorragie.

A cause de ce pouvoir constricteur, l'adrénaline produit une ischémie locale par réduction de diamètre de ces artérioles, augmente la pression du sang. Cette augmentation est proportionnelle à force et la quantité injectée. Quand elle est injectée directement dans la circula-

tion, son action est spontanée. Si elle est injectée dans la peau, ses effets sont plus lents, à cause de son pouvoir constricteur, qui retarde l'absorption, ce qui permet l'écoulement d'une infime portion dans le courant sanguin.

Une injection faite directement dans le courant sanguin ralentira le coeur, parce que l'augmentation de pression excite et stimule le Vague dont la fonction est de ralentir le coeur.

Les autres effets de l'Adrénaline sont de prolonger l'anesthésie et d'intensifier l'action de l'anesthésique, de diminuer la quantité d'anesthésique nécessaire, et d'empêcher l'hémorragie au cours de l'opération.

Des solutions très diluées qui agissent comme stimulants sont employées dans les cas d'évanouissements, et de chocs nerveux, afin d'augmenter la pression. Il est intéressant de savoir que l'Adrénaline produit une vasoconstriction plus grande dans certaines parties du corps que dans d'autres. Par exemple, l'épinéphrine n'exerce aucun effet, sur les vaisseaux du poulmon, alors qu'il a une action modérée sur le foie et une action marquée sur l'estomac, l'intestin et sur la peau.

TRAITEMENT

Une circulation normale est une fonction vitale qui est nécessaire dans le maintien de la santé. En fait, c'est le système cardiovasculaire, qui est déficient dans la majorité des conditions pathologiques. Dans un cas de défaillance, il faut donc s'efforcer de rétablir la circulation normale. Pour cela, il faut:

- 1—renverser le fauteuil pour faciliter la respiration et alimenter le coeur, i.e., placer le patient de façon à ce qu'il ait la tête plus basse que le coeur.
- 2—faire l'aération de la pièce.
- 3—prescrire des médicaments qui s'administrent:

A) Par la bouche:

Solution ammoniacale: (5 cc de NH_3 dans 5 cc. de H_2O .)

Coramine: 15 gouttes dans un peu d'eau tiède.

Adrénaline: 12 gouttes dans un peu d'eau tiède.

Strychnine: un comprimé de 1/64, avec un peu d'eau tiède.

Spartéine: un comprimé de 1/12, avec un peu d'eau tiède.

B) Par injection:

Strychnine: 1/64 de grain dans injection:

hypodermique
intramusculaire
intra-veineuse.

Pressyl: ibidem.

Coramine: ibidem.

C) Par inhalation:

sels d'ammoniac
nitrite d'amyle.

Dans le cas de nervosité, prescrire Sedol ou Nembutal.

Dans les cas plus graves de défaillance cardiaque, il faudra en plus:

- 1—Pratiquer la respiration artificielle, si la respiration a cessé.
- 2—prescrire l'huile de camphre, strychnine, caféine, et l'éther par inhalation, si la pression est très basse, accompagnée d'un pouls rapide et faible.
- 3—administrer le nitrite d'amyle, l'huile de camphre ou la strychnine, qui sont des vaso-dilatateurs, si la pression est haute, et causée par l'action de l'épinéphrine.

CONCLUSIONS

La défaillance est un accident de la circulation cardiovasculaire, résultant de l'épuisement des centres vaso-moteurs contigus à la vaso-dilatation des artères. Le sang est refoulé dans l'aire splanchnique, privant le cerveau, de la quantité d'oxygène fourni par ce liquide au cours d'une circulation normale, et produisant l'anémie et la défaillance.

Le grand principe de la guérison consiste dans le rétablissement de l'état normal et dans l'établissement de l'équilibre entre la capacité de fonctionnement du système circulatoire et le volume du sang circulant. Pour cela, il suffit d'injecter un agent au pouvoir constricteur, pour resserrer les vaisseaux distendus, et puis de donner au cœur une impulsion nouvelle. Nous constaterons alors que notre patient, qui avait le tête en bas, il y a un instant, reprendra sa position verticale.

Congrès National, à la Malbaie

La Société de Stomatologie de Québec, qui organise le Congrès des dentistes canadiens, au Manoir Richelieu, à Murray Bay, demande aux dentistes canadiens-français de s'inscrire le plus tôt possible.

Cette réunion nationale des membres de l'Association Dentaire Canadienne aura lieu les 20, 21, 22, 23, 24 juin 1948.

Toutes les demandes de renseignements doivent être expédiées au:

DOCTEUR GUSTAVE RATTE
140 rue S.-Jean, Québec, P. Qué.

Cours de perfectionnement à l'Université de Montréal

Grâce à la fondation Kellogg, la faculté de Chirurgie Dentaire de l'Université de Montréal offre aux praticiens des cours de perfectionnement dans les domaines et aux dates suivantes:

Chirurgie et Anesthésie: semaine complète, du 19 au 24 avril 1948

Endodontie: une semaine complète, du 3 au 8 mai 1948

Prothèse: 1) semaine complète, du 5 au 10 avril 1948

2) deux semaines (durant la matinée seulement), du 12 au 24 avril 1948.

On demande tous les renseignements, en s'adressant au:

DOCTEUR ERNEST CHARRON, doyen,

Faculté de Chirurgie Dentaire, Université de Montréal,
2900 Boul. Mont-Royal, Montréal.

Discours prononcé a la séance inaugurale du X^e Congrès Dentaire International

tenu à Boston, du 4 au 8 août 1947

par A. E. ROWLETT, président de la Fédération Dentaire Internationale
(suite et fin)

Néanmoins, la décision fut prise avec la conviction absolue qu'il était indispensable pour le bien de la Dentisterie et le Service dentaire mondial de reprendre notre oeuvre internationale sans délai et de développer l'esprit de coopération avec les jeunes générations de praticiens, dont dépend l'avenir de notre profession.

Réorganisation du Secrétariat

Il vient un moment dans la vie de toutes les grandes organisations, où le service volontaire dans les comités directeurs doit faire place à des dirigeants rémunérés. Jusqu'à présent l'organisation de la F.D.I. a été assumée par ce service volontaire.

La situation d'après-guerre est telle qu'il ne peut plus en être de même à l'avenir, et, à l'unanimité, le Conseil Exécutif a décidé la constitution d'un bureau permanent, dont au moins un membre serait à même de consacrer tout son temps aux responsabilités qu'il assurerait à la F.D.I.

Cette réforme entraîne la nécessité de nouvelles ressources. Un projet a été établi, au terme duquel, les sociétés dentaires nationales, qui composent la Fédération assureraient à celle-ci une souscription proportionnelle au nombre de membres, avec un maximum de 6,000.

Ces deux nouveaux projets, à savoir la réorganisation du secrétariat et le plan financier, ont été soumis préalablement aux comités nationaux et leurs principes furent admis à l'unanimité dans les pays d'Europe.

Le Conseil Exécutif réuni à Boston aura à prendre une décision définitive à ce sujet.

Ainsi que je vous l'ai dit, la F.D.I. en tant qu'entité a été rendue possible dans le passé par le sacrifice de temps, d'éner-

gie et d'argent d'un petit nombre d'hommes.

Le cataclysme qu'a constitué une guerre totale, a marqué la fin d'une période de service entièrement désintéressé en dentisterie aussi bien que dans grand nombre d'autres associations humaines.

Le problème qui se propose est celui-ci: les commissions dentaires nationales de la Fédération pourront-elles à l'avenir travailler en une harmonieuse collaboration dans les mêmes conditions qu'un petit nombre d'individuels le faisait dans le passé?

Si nous réussissons dans l'application des nouveaux plans proposés, ce ne sera pas seulement une expérience de grande valeur pour la dentisterie mais même pour les formes démocratiques de gouvernement.

Abraham Flexner, l'auteur d'une étude monumentale sur l'éducation médicale en Amérique du Nord a dit:

"Le fait essentiel qui se dégage de cette investigation est, qu'en matière de médecine comme dans toutes les formes d'éducation, le facteur essentiel est un facteur éducatif. La matière constituant le curriculum peut varier, elle peut être médecine, dentisterie, industrie, l'art d'ingénieur, etc. . . , dans chaque cas les facteurs fondamentaux sont les facteurs éducatifs. De même l'on peut dire, si l'on veut évaluer la signification d'un congrès international, que le facteur essentiel est un facteur international. Le programme peut varier soit qu'il s'applique à la médecine, dentisterie, aux finances, à l'art de l'ingénieur, etc. . . . ici encore le facteur fondamental est toujours le facteur international."

Le but de ce Congrès peut être défini: "La Dentisterie dans ces relations envers la santé mondiale."

Sans aucun doute, les travaux de ces Congrès constitueront une importante contribution envers le problème de cette santé mondiale, mais s'il ne devait pas y avoir comme résultante un développement dans la collaboration humaine des représentants des sociétés dentaires nationales, ces Congrès à ce point de vue international seraient un échec.

Je me hâte d'affirmer avec certitude, ce qui est mon avis et celui des représentants des quarante et une nations réunies ici et dont j'ai pu connaître les impressions, que nous pouvons déjà considérer que ce Congrès est un grand succès et a d'une façon concrète, contribué à intensifier l'harmonie internationale.

Il serait difficile de surestimer notre gratitude envers le Président et les dirigeants de l'A.D.A., dont l'esprit compréhensif et généreux a rendu possible cette véritable résurrection de la F.D.I.

A la suite de la mort du Président Logan en 1946, et de l'élection d'un Européen comme son successeur, les étapes initiales de cette résurrection se déroulèrent en Europe et leur succès est dû à l'énergie et le dévouement de notre Secrétaire général, Ch. Nord.

Rappelons, cependant, que tel le Phénix et en vertu même de ses statuts, la Fédération doit mourir et renaître à intervalle régulier et cette sorte d'auto-immolation ne peut se réaliser que dans le feu d'un congrès dentaire international.

Nous sommes particulièrement reconnaissants au Board of Trustees pour la sympathie qui a été témoignée au Dr Nord lorsqu'il vint aux États-Unis en 1946 et pour l'invitation généreuse qu'ils adressèrent à la F.D.I. pour tenir leur congrès dans ce pays.

Aucune autre nation n'aurait pu assurer cette tâche et nous nous rendons parfaitement compte de l'effort considérable que s'est imposé le secrétariat de l'A.D.A. de superposer à la charge déjà lourde d'organiser le premier meeting de cette association après la guerre, le souci d'un congrès dentaire international.

La mort des Drs Logan et Burkhardt nous a enlevé les deux hommes qui avaient une toute particulière compétence en matière d'organisation des congrès

internationaux et c'est pour nous une raison de plus de féliciter l'A.D.A. pour la réussite de cette organisation dans des circonstances aussi difficiles.

Nous adressons nos remerciements les plus reconnaissants à tous ceux, qui ont pris part dans l'organisation du congrès et tout particulièrement au Dr Walter Scherer, Past Président de l'A.D.A., le Dr Sterling Mead, Président, Dr Hillenbrand, Secrétaire organisateur, Dr Dan Lynch, Président du Comité des Relations Internationales, Dr Oren Oliver, Président du Comité d'admission.

Le Dr Oliver qui a notamment par son enthousiasme et son activité récolté déjà \$8,000.—de cotisations des membres individuels. Cette contribution donnera à la F.D.I., dont la situation financière était extrêmement difficile, l'aide suffisante pour s'adapter aux nécessités d'après-guerre.

Voilà certes, ce qui peut s'appeler de l'idéalisme pratique.

Mesdames, Messieurs, en tant que membres d'une organisation internationale, notre devoir est de rechercher dans le caractère national respectif, les mobiles intimes qui pourraient animer l'intérêt aussi bien que l'idéal sur lesquels nous pouvons, en une harmonieuse collaboration, développer les activités d'une paix créatrice.

Le Dr S. Johnson a écrit quelque part: "Ne parlez jamais d'un homme en sa présence, c'est toujours un manque de délicatesse et cela peut même être une offense." N'écoutez pas ce conseil, je me hasarderai de parler de l'Amérique et des Américains et d'esquisser ce qui me paraît être chez eux des mobiles de caractère national et le germe de leur réelle grandeur.

L'Amérique est proverbialement le pays de l'opportunité. "Un pays où chaque homme possède des droits inaliénables à la vie, à la liberté et à la recherche du Bonheur." C'est ainsi que s'exprimait Jefferson en 1776. Quarante années après, Jackson fit entendre la même voix, c'est-à-dire l'opportunité pour chaque homme de la communauté et le peuple répondit comme un son de trompettes.

Lincoln, à Gettysburg, et Woodrow Wilson, à sa deuxième inauguration comme Président, firent également entendre la même note. Il faut cependant faire remarquer que Woodrow Wilson était handicapé par le fait qu'il était considéré comme un homme supérieur et non comme un homme du commun. Nous croyons que l'idéal américain ne doit pas être considéré comme se rapportant essentiellement à des automobiles ou à des hauts salaires, mais plutôt comme la vision d'un pays qui serait plus riche et plus accueillant pour chaque homme si chaque homme se voit accorder la chance en rapport avec ses capacités.

C'est la vision d'un ordre social auquel chaque homme et chaque femme pourra contribuer dans toute la mesure dont il ou elle est capable. Un ordre dans lequel chacun sera reconnu pour ce qu'il est, en dehors de toutes conditions de naissance et de situation.

Les Américains sont, cependant, des idéalistes pratiques et c'est sans doute la raison pour laquelle des hommes tels que Miller, Kirk, Brophy, Logan et Burkhardt ont été de tels "Supporters" de la F.D.I.

Ce double but de la politique américaine se manifeste particulièrement dans la convention de 1787, lorsque Washington choisit comme principal conseiller Thomas Jefferson, secrétaire d'état, et Alexandre Hamilton comme son trésorier. Hamilton était partisan de la force et du pouvoir, Jefferson était plutôt l'idéaliste américain.

Les principes restaient inchangés, comme a dit le poète Pope, "Il y a dans l'homme beaucoup de nature humaine". Je suis convaincu que ce noyau d'idéalisme pratique peut être trouvé dans la nature de chacun des quarante et un pays présents à ce congrès et même dans toute l'humanité.

Jamais dans l'histoire, des organisations internationales n'ont eu plus d'importance et ont assumé de plus lourdes responsabilités, et j'eusse désiré que la tâche qui m'a été décernée ce matin ait été confiée à des mains plus capables et le thème de mon discours à un orateur plus éloquent.

Depuis le dernier congrès, la F.D.I. a perdu plusieurs éminents membres, sur les avis et les conseils desquels nous avions l'habitude de compter.

Deux Présidents d'honneur, le Dr Georges Villain de France, dont la mort tragique en pleine force vitale a privé la Dentisterie internationale d'une de ses personnalités les plus brillantes; le Dr Harvey Burkhardt dont la perte est pour la Fédération particulièrement lourde, en raison de son indomptable énergie et de sa rare expérience; notre Président en exercice, le Dr W. H. Logan, dont la perte est particulièrement cruelle au moment où nous avons besoin de cet homme également énergique pour résoudre les difficultés d'après-guerre.

Enfin, quatre membres du Bureau, Dr Goia, Italie; Dr Ciezynski, Pologne; Professeur Gilmour, Angleterre; et le Dr Roy, France; le Dr Huet, Belgique et le Dr Janisch l'un des secrétaires du Comité d'Organisation du Congrès de Vienne. Chacun de ces hommes était un des "Leader" de la profession mondiale et dans son propre pays, et avait contribué à l'activité de la Fédération pour de longues années.

Nous déplorons leur perte et le meilleur hommage que nous puissions leur rendre est de nous inspirer de leur exemple.

Nous, les anciens, nous avons eu notre temps, l'avenir est dans les mains de générations plus jeunes. Nous leur demandons donc de consacrer leur vie au vivant présent et à l'avenir dont l'importance est immense. Que ces jeunes générations agissent en s'inspirant de l'esprit de l'homme qui a dit: "Nous ne nous tournons pas vers le passé qui est mort, mais nous nous rendons compte de nos responsabilités envers les hommes qui sont en vie et qui attendent de nous l'inspiration et le conseil et qui nous regardent comme leurs guides, ainsi que nos responsabilités envers les générations futures, lesquelles s'en iront vers le Bonheur ou la Misère, suivant ce qu'auront été nos actions ou nos omissions.

Programme du Congrès de l'Association Dentaire Canadienne

MANOIR RICHELIEU, MURRAY BAY, P. QUE.

du 20 au 24 juin 1948

Dimanche, le 20 juin

Heures	
1.00.....	Arrivée
2.00.....	Lunch
2.00 à 6.00.....	Inscription dans le lobby Sports et temps libre
6.30.....	Diner
8.00 à 9.00.....	Concert dans le lobby
9.00.....	Cinéma

Lundi, le 21 juin

9.00.....	Inscription dans le lobby
9.30 à 11.30.....	Clinique de tables
11.30 à 1.00.....	Visite aux exposants
12.30 à 2.00.....	Lunch
2.15.....	Ouverture officielle
2.45 à 5.00.....	Conférencier, Dr H. Hillenbrand, Casino "L'avenir de la dentisterie."
	Conférencier, Dr P. Jay, Casino "Carie dentaire."
4.30 à 6.00.....	Visite aux exposants
6.30 à 8.30.....	Diner
9.30 à ?.....	Réception du président et danse

Mardi, le 22 juin (échangeable avec mercredi)

9.30 à 11.45.....	Cliniques
11.30 à 1.00.....	Visite aux exposants
12.30 à 2.00.....	Lunch
2.00.....	Temps libre, Golf, Pêche, Sports
2.00 à 4.30.....	Films scientifiques
2.00 à 6.00.....	Visite aux exposants
6.30 à 8.30.....	Diner
7.00 à 10.00.....	Visite aux exposants
9.00.....	Cinéma

Mercredi, le 23 juin

9.30 à 11.45.....	Cliniques
11.30 à 1.00.....	Visite aux exposants
12.30 à 2.00.....	Lunch
2.30 à 4.45.....	Conférencier, Dr Leroy Miner, Casino "Pénicilline & Streptomycine."
	Dr G. G. Exner, Casino "Chirurgie buccale moderne."
4.30 à 6.00.....	Visite aux exposants
6.30 à 8.30.....	Diner
7.00 à 10.00.....	Visite aux exposants
9.00.....	Danse au Casino

Jeudi le 24 juin

9.00 à 10.30.....	Conférencier Dr Kurt H. Thoma, Casino "Etude comparative des Rayons—X et des lésions pathologiques chirurgicales de la bouche."
10.30.....	Assemblée générale de l'Association Den- taire Canadienne
12.30.....	Lunch au Manoir avant le départ du bateau

Congrès National des Dentistes Canadiens

à la Malbaie, les 20, 21, 22, 23, 24 juin 1948

Conférenciers

- DR GEORGE G. EXNER.....LONDRES, ANGLETERRE
"Chirurgie buccale moderne."
- DR H. Hillenbrand. SECRETAIRE DE L'ASSOCIATION DENTAIRE AMERICAINE
"L'avenir de la dentisterie."
- DR PHILIP JAY.....UNIVERSITE DU MICHIGAN
"Carie dentaire."
- DR LEROY MINER.....BOSTON, MASS.
"Pénicilline et Streptomycine."
- DR KURT THOMA.....UNIVERSITE HARVARD
*"Etude comparative des radiographies et des lésions
 pathologiques chirurgicales de la bouche."*

Cliniciens

- DR H. M. CLINE.....VANCOUVER, C.B.
"Aurifications."
- DR H. J. GODFREY.....UNIVERSITE DE TORONTO
"Conception et réalisation des prothèses partielles."
- DR PAUL GEOFFRION.....UNIVERSITE DE MONTREAL
"Orthodontie à la portée de tous."
- DR JAMES McCUTCHEON.....UNIVERSITE MCGILL
"Prothèse complète."
- DR PRESCOTT MOWRY.....UNIVERSITE MCGILL
"Traitements dentaires requis par la plupart des patients."
- DR J. KREUTZER.....TORONTO, ONT.
"Amalgames."
- DR CHARLES MORGAN.....GEORGETOWN MEDICAL AND DENTAL SCHOOLS,
 WASHINGTON, D.C.
"Sulfamidés et antibiotiques."
- DR H. H. PEARSON.....MONTREAL, QUE.
"Endodontie pour le praticien."
- DR HYMAN PINES.....NEW YORK UNIVERSITY
"Coiffes en porcelaine."
- DR J.-P. TROTTIER.....UNIVERSITE DE MONTREAL
"Incrustations en or."

Films Cinématographiques

N.B.—Ces films seront montrés plusieurs fois durant le congrès

- “*Correction de prognathisme:*” 16 mm. (en couleurs) 30 min.
DR JOSEPH E. SCHAEFFER, M.D., D.D.S.,
804 OUEST, 79E RUE, CHICAGO, 20.
- “*Le Penthotal de Sodium pour le patient du bureau:*”
16 mm. (en couleurs) 45 min.
DR EDMUND ROBERTS, 516 BROAD ST., NEWARK, N.J.
- “*La résection immédiate du canal:*” 16 mm. (en couleurs) 35 min.
DR LOUIS GROSSMAN, UNIVERSITE DE PENNSYLVANIE,
PHILADELPHIE, 4.
- “*Dentiers immédiats:*” 16 mm. (en couleurs) 40 min.
DR STANLEY G. STANDARD, 225 OUEST, 34E RUE, NEW YORK
- “*Préparation d'une pile pour une couronne complète coulée avec porcelaines interchangeables. Technique opératoire pour la confection de dentiers complets à l'aide d'appareils de précision:*”
16 mm. (en couleurs) 30 min.
DR DAVID GROSSER, 311 AV. COMMONWEALTH, BOSTON.
- “*Ostéotomie du condyle pour la correction d'une ankylose de l'articulation temporo-mandibulaire:*” 16 mm. 25 min.
DR HARRY SELDIN, 57 OUEST, 57E RUE, NEW YORK.
- “*Traitement du canal radiculaire:*” 16 mm. (en couleurs) 40 min.
DR ROBERT KESEL, UNIVERSITE DE L'ILLINOIS, CHICAGO.
- “*Nouvelle méthode de brochage interne des fractures des maxillaires:*”
16 mm. 15 min.
DRS FRANK McDOWELL ET JAMES BARRET BROWN,
400 METROPOLITAN BLDG, GRAND AVE & OLIVE ST., ST-LOUIS, 3.
- “*Technique simple pour apectomie:*” 16 mm. (en couleurs) 12 min.
DR ROBERT FISHER, 73 EST, 90E RUE, NEW YORK.
- “*Matrices:*” 16 mm. 25 min.
DR WALTER J. PELTON, U.S. PUBLIC HEALTH SERVICE,
DENVER 2, COLORADO.
- “*Enucléation d'un kyste du maxillaire:*” (en couleurs) 20 min.
DR ROBERT FISHER, 73 EST, 90E RUE, NEW YORK.
- “*Kystes des maxillaires:*” (en couleurs) 15 min.
DR M. J. BOYER, STATE CAPITOL BLDG,
4700 BERLENLINE AVE., UNION CITY, N.J.

UNIVERSITE DE MONTREAL

Cours Post-Scolaire en Orthodontie, du 21 au 31 janvier 1948



1ère rangée, de g. à d.: les docteurs Abijah D. Pierce, Greenfield, Mass.; Onil Hébert, Montréal; Clare K. Madden, Greenwich, Conn.; Franklin A. Squires, White Plains, N.Y.; Joseph L. Johnson, Louisville, Kentucky; Paul Geoffrion, Montréal; Leuman M. Waugh, New York City, N.Y.; Joseph D. Eby, New York City, N.Y.; Louis Lépine, Montréal; J. A. Robinson, Niagara Falls, Ont.; Milton Neger, Newark, N.J.

2ème rangée, de g. à d.: les docteurs David J. Gross, Brooklyn, N.Y.; Allen Bimston, New York City, N.Y.; Marvin A. Bregman, New York City, N.Y.; Robert Cohen, Montréal; Errol Bayly Clift, Montréal; William S. Chu, Vancouver, B.C.; LeRoy D. Levey, Chicago, Ill.; Verl F. Amend, Great Bend, Kansas.

On remarque aussi les docteurs Guy W. Toph, Tampa, Florida; Robert C. Grimsd, Jamestown, N.Y.; August H. Twist, Lackawanna, N.Y.;

Elbert M. Upshaw, Atlanta, Georgia; H. T. Oliver, Montréal; Paul Wilcox, Evanston, Ill.; Carl A. Asher, Chicago, Ill.; Charles H. Smith, Athens, Georgia; Maurice J. Savitz, Boston, Mass.; Franklin W. Jones, Winnipeg, Manitoba; Harvey C. Arnott, Oshawa, Ontario; Charles J. Waldron, Trenton, N.J.; John J. Murray, New York City, N.Y.; Horace P. Clark, Trenton, N.J.; Herbert S. Fine, Mount Vernon, N.Y.; Raymond K. Tongue, Baltimore, Maryland; Bernard S. Kove, 280 Broadway Avenue, Monticello, N.Y.; Braithwaite Dixon, Ottawa, Ontario; George A. Glaser, Buffalo, N.Y.; Jack A. Marshall, Belleville, Ontario; Louis Bernier, Québec; James P. Lawlor, Waterbury, Conn.; Otto Bengle, Montréal; Anderson Arbury, Midland, Mich.; Arthur B. Lassman, Geneva, Ill.; Raymond R. Ringland, Park Ridge, Ill.; Harry J. Kent, Chicago, Ill.; William A. Morrinville, Pawtucket, R.I.



Courtesy, Canada Steamship Lines Ltd.

National Convention, June 20-24

● This picture shows the last stage of our journey to Manoir Richelieu at Murray Bay. Over 2,500 original pictures decorate lounges, corridors and private suites of this hotel which is fireproof, soundproof and cool. Here the Atlantic tidal pulse moves along the great St. Lawrence River. Here the skill of enthusiastic golfers will be challenged and you will be stimulated, happy and refreshed.

Yes, you must go; you just can't ignore our National Convention which is to be held in June in such splendid surroundings.





THEO. GODIN, M.A., D.D.S.
Campbellton, New Brunswick

President of the New Brunswick Dental Society.
Chapter member of "Le Comité Permanent de la Bonne Presse."
Member of "L'Association Acadienne d'Education" and of
"La Société L'Assomption".
Member of the Council of Dental Surgeons of the Province
of New Brunswick for the last 10 years.
Graduate: Université de Montréal, 1930.



The Journal

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No. 5

ACUTE INFECTIONS OF THE FACE AND JAWS*

by RALPH G. PETERSON, D.D.S., Minneapolis, Minnesota.

ACUTE infections of the face and jaws are not uncommon, and we, as dentists, are often confronted with the treatment of such infections for patients.

These infections are usually caused from dental disease, injuries, and other pathologic conditions adjacent to the oral cavity and the jaws. Acute infections of the jaws and face may vary from a small gum inflammation to an extensive diffuse cellulitis. Infections should be considered emergencies, but they should be treated cautiously and with best judgment and skill. Thorough diagnosis by careful examination, good radiographs, and laboratory procedures are especially important.

Of the acute infections of the face and jaws, dental disease is the most common. This includes acute pulpitis, periapical abscesses, lateral periodontal abscesses, and acute gingivitis. Other causes are traumatic injuries, jaw fractures, salivary duct and gland stones, and tumours. Any of these may be the forerunners of the most severe infections we know in this region, including severe osteomyelitis, diffuse phlegmonous cellulitis of the face and neck, cavernous sinus thrombophlebitis, and general septicaemia with its complications.

The behaviour and progression of infections about the jaws and face follow a general pattern but have varying characteristics in their course of development and extension.

Anatomical arrangements of tissue layers, separated by fascial planes, provide potential spaces or pockets into which infections extend and localize. These potential spaces have been classified as muscular fascial spaces and visceral vascular spaces or they have been described anatomically, relative to the regions involved. There is no specific standardized descriptive nomenclature. In general, the anatomically described nomenclature seems to be more popular.

The most common anatomical sites are the intra-oral sub-mucoperiosteal alveolar regions, the floor of the mouth, the anterior neck, the submental and the submaxillary regions, the temporal region, the lateral pharyngeal and pterygoid space regions, the infra-orbital regions and the maxillary sinuses.

Time will not permit discussion of the numerous anatomical regions about the face and jaws in this paper.

Treatment of the acute infections of the face and jaws should be moderately conservative.

In most cases where the infection is

*Presented before the Toronto Academy of Dentistry, the Hamilton Dental Association, the London Dental Society and the Niagara Peninsula Dental Association in January 1948.

of dental origin and swelling, elevation of temperature and pain exists, it has not been considered advisable to remove teeth in the infected area. Ultra conservatism was the common practice. Since the advent of the antibiotics, management in treatment of such acute infections has become more liberal. Confidence in the protective and therapeutic actions of the antibiotics has not alone encouraged more liberalism in the management of infections, but there has become a more rational interpretation of the mechanics and reaction patterns, the resistance and tolerance of tissues to toxicity in these acute infections, and the recovery or repair of the tissues following the damage done by the destructive infection process. There is no special rule to follow in treatment, except basic principles of surgery, experience and surgical judgment are essential factors.

I have adopted and practised a moderately liberal routine in the treatment and management of acute dental infections. Essentially, these infections are not classified, but they do vary in groups, so to speak, in the degree of progression and severity, and the pattern of their extension. This routine has worked to the best advantages for the patients and resulted in the minimal of discomfort, disability, and complications.

Group I. In cases of acutely infected teeth without adjacent soft tissue involvement, such teeth are removed at the earliest time following diagnosis and without drainage or treatment through the pulp canals.

Group II. In cases where primary cellular oedema in adjacent soft tissues has begun and where an unlocalized primary sub-periosteal infection exists, but where definite induration in the adjacent soft tissue has not yet developed, the involved teeth are immediately removed. If evidence of localized sub-periosteal exudate can be positively palpated along the mucobuccal or muco-labial fold intra-orally and associated with the above find-

ings, incision for drainage into the localized area down through the periosteum is done and a drain is inserted at the same time the teeth are extracted. If no positive localized exudate is definitely palpable, no incision is made into the area when the teeth are extracted.

Group III. In cases of advanced progression of the infection to a hard indurated cellulitis in the soft tissues of the neck and face, surgical interference is delayed until positive localization has developed, then extra-oral or intra-oral incision of the soft tissues is done, a gauze drain is inserted and the involved teeth are extracted in the same operation. Such procedures have proven to be safe when adequate antibiotic therapy has been instituted and continued.

Here, two separate infection entities, bone and adjacent soft tissues, are treated which are associated, but which in themselves "wall off" and subside as individual infections. No primary infected teeth remain to kindle the subsiding cellulitis. This procedure differs only slightly from the past conservative procedure where a second operation is performed for the removal of the involved teeth at a subsequent time after the cellulitis has subsided.

Group IV: In cases of obscure infections of questionable aetiology as caused by degenerating or infected tumours, infected glands, blood dyscrasias, systemic disease, osteomyelitis, osteoradio-necrosis, actinomycosis and other rarer infections or diseases, these are managed conservatively by routine definitive treatment for the respective conditions. Of this latter group a few of the infections may be commented upon.

PERICORONITIS

Acute pericoronal inflammation, or pericoronitis, particularly about the lower third molar teeth, is seen frequently. Often this condition causes much discomfort and even illness. It may result from specific Vincent's in-

fection or a common acute obscure inflammatory process caused by eruption irritation, food impactions, trauma, or poor oral hygiene. Conservative treatments by removal of the sedimentary debris, local medications, or irrigations, generally relieve the acute symptoms. Usually it is advisable to use a syringe with a moderately large gauged blunt hypodermic needle for irrigation beneath the swollen tissue flap or infected pockets. Weak warm hydrogen peroxide solution or neocarsphenamine solution are both good for irrigations. It is advisable to delay the removal of imbedded teeth in the presence of the very acute stage of pericoronal infection, where it becomes necessary to incise inflammatory tissue, excise bone or cause trauma in order to remove the teeth, until some local treatment irrigations and antibiotic therapy has caused the acuteness to subside. The removal of teeth in the subacute stages can be performed with reasonable safety if a general anaesthesia is used and adequate drainage is assured.

OSTEOMYELITIS

Osteomyelitis of the jaws is not considered a specific bacterial infection, as the bacteria found include the staphylococcus, streptococcus, pneumococcus and bacillus. Osteomyelitis may have its origin in deeply carious and infected teeth, teeth with deep pyorrhea pockets, teeth with gangrenous pulp, curettement of infected extraction sockets, infected jaw fractures and other traumatic injuries or latent residual infections. It may arise from a haematogenous origin, from metastasis of a primary osteomyelitis elsewhere in the skeleton or from other foci of infection. Patients with malnutrition, lowered resistance or poor dentition seem to be most susceptible to the disease.

Osteomyelitis in either children or adults is a hazardous disease. Progress of the disease in children seems to be more rapid and the mortality is higher. Temperature ranges may go criti-

cally high. Pain usually is severe, particularly at the onset of the disease. In the treatment of osteomyelitis, early recognition is important. Conservatism and caution in treatment with the maintainance of adequate drainage are pertinent factors. General supportive treatment with adequate high caloric, high protein diet with supplemental vitamin therapy is preferred, unless such a diet is contra-indicated for other reasons. Autogenous vaccines are of doubtful, if any, therapeutic value. X-ray therapy judiciously used may aid in early resolution of the cellulitis. Curettement, removal of sequestra not separated and injudicious removal of the teeth are contro-indicated in the course of treatment. No drugs seem to be of any specific benefit in the healing of bone in the treatment of osteomyelitis. Although penicillin, streptomycin, and sulphonamide drugs have no apparent beneficial specific effect upon the healing of bone there are no known ill effects. It is advisable to administer antibiotics in heavy doses particularly during the early acute stages of the disease in hope that some therapeutic benefits may result.

Following deep x-ray or radium treatment of malignant lesions, osteoradio-necrosis of bone may occur and result in a lesion simulating osteomyelitis. The behaviour and treatment of such conditions are essentially the same except that there is less tendency for the regeneration of bone destroyed by radiation.

ACTINOMYCOSIS

Another infection that confronts us occasionally is actinomycosis, caused by the ray-fungus actinomyces. This infection may run an unpredictable course. It is difficult to demonstrate specific diagnosis of actinomycosis. It may be acute or chronic with exacerbations and remissions until the final cure. The disease may be of short duration or persist over a long period of time. It may become metastatic. Incision for drainage, thorough curet-

tement of the entire wound and adequate aeration of the wound is still the method of choice for treatment of this disease as far as we know. The wound should be kept open by the use of gauze packing. Dry iodoform gauze is preferred. Whether or not saturating the packing gauze with antibiotics has been of value in some of our cases, I can't say. The course of healing seemed to be about the same as when these antibiotics were not used. Large doses of penicillin are also given parenterally with the hope that some benefit may be derived. Although some cases have been reported, no definite confirmations have substantiated successes to such an extent that antibiotics including streptomycin are accepted as specific treatment, even though these preparations are being much used. Routine use of the antibiotics, of course, is advisable as a prophylactic in the treatment of actinomycosis.

INCISION FOR DRAINAGE

A brief review of the sites of incision for drainage might be of interest, but first, a few surgical principles should be kept in mind. Where incisions for drainage are made, the wounds should always be kept open by means of gauze strip or rubber tube drains for a reasonable length of time depending upon the case and the subsequent progressing healing. General anaesthesia is preferred in the surgical treatment of most infection cases. Local procaine anaesthesia is acceptable in certain cases. As a general rule, incisions into localized infections are made directly over the pointing abscess. In making incisions, caution should always be exercised to avoid the accidental cutting of important anatomical structures. Stab incisions and deep direct incisions should never be made. Shallow incisions through the skin, followed with blunt dissection into the infected area, are preferred. Large disfiguring scars can be avoided by reasonably smaller operative incisions.

Incisions for drainage in the sublingual or submental area of the mandi-

bular space are made below the inferior border of the mandible and parallel to it. In the submaxillary or masticator space, the line of incision is in the same direction as in the submental region but farther back and usually just forward of, or opposite the angle of the mandible. The external maxillary artery is adjacent to these two regions, therefore, caution should be exercised to prevent cutting the artery.

In the parotid region just behind and above the submaxillary region or masticator space, the line of incision is close to and slightly below the lobe of the ear in a direction about parallel to the posterior border of the ramus. Caution to prevent cutting the facial nerve is important in this region.

In the temporal region, localization is usually just above the zygomatic arch in the infra-temporal fossa. The incision is made just above this arch through the area located about $\frac{1}{2}$ of the distance between the lateral orbital ridge and the ear, and in a vertical oblique direction of a line extending from the common hairline of the forehead to the lobe of the ear. This incision will come in about the safest anatomical region. Caution to protect the anterior temporal artery and the frontal branch of the facial nerve is important.

Sublingual infections localize sometimes in the floor of the mouth and in the anterior neck as well as in the submental region. The line of incision in the neck, in such cases, is generally below the symphysis and a little to the side of the mid-line of the neck. A severe Ludwig's may involve both sublingual spaces, requiring a crescent shaped incision across the midline of the neck and usually paralleling the curvature of the inferior border of the symphysis.

The suprasternal and supraclavicular spaces are not so common for extension of these infections. Incisions in these regions should be performed by a specializing physician-surgeon.

In the mouth, it is best to make all

incisions in a direction paralleling the muco-labial or muco-buccal folds of the vestibules or in a general direction of important anatomical structures in the respective regions involved.

In the pterygoid and lateral pharyngeal area, incisions are generally made over the points of localization. These incisions may be lingually to, below, or posterior to the tuberosity region, below the retromolar area, or just forward of the tonsillar region in the glosso-palatine arch. the two latter infections, are usually caused by contaminated hypodermic needles, operative displacement of imbedded teeth or roots into the area, accidental slipping of an instrument introducing contamination into the tissues, or other inflammatory infections in the throat, as tonsillitis, quinsy, streptococcic sore throat, etc.

In acute antral infections of dental origin, intra-nasal excision of a portion of the naso-antral wall in the inferior meatus establishing a patent naso-antral window is advisable for subsequent drainage, irrigation, or treatment, and is commonly performed by the nose and throat physicians. This also can be accomplished by using the Caldwell-Luc approach intra-orally through the canina fossa. If any amount of nasal polyps, oedematous antral mucosa, antral polyps, mucous cysts, or hypertrophic antral contents associated with exudate are present, the Caldwell-Luc approach is preferred and it facilitates direct vision and accessibility into the sinuses.

ORAL SEPSIS AND SYSTEMIC DISEASE

Oral sepsis is considered to be definitely related to systemic disease and this fact remains a pertinent factor in medicine at present. Authoritative sources still consider all oral infections and infected teeth a menace to the individual's general health. The interpretation of incipient pathology, may not be perceptible to the human eye in examining x-rays in the absence

of gross or clinical symptoms. Uncertain pathologic conditions should be dealt with conservatively. Advanced pathosis, as advanced infections, granulomas, retained roots, residual infections and diseased tooth supporting tissues which are interpretable by x-ray, should be eradicated. Since first recognized by such pioneers as Hunter and Rush, more rational interpretation, experiences and considerations in this matter has evolved. Experiences have altered opinions, yet there are sufficient statistics and data to formulate definite facts by which to be guided to substantiate our present opinions and conservative practices in dealing with systemic disease as related to oral sepsis.

I wish to call your attention to excerpts of comparatively recent releases from the American Heart Association—

Quote: "The initiation of a nationwide program of public education and information on diseases of the heart was announced by officials of that association. The program will have as its prime purpose the dissemination of education information to the public in a broad effort to retard the rapid increase of heart disease throughout the nation. Fatalities ascribed to diseases of the heart are greater than the total of the five leading causes of death. Penicillin was revealed as an effective agent in preventing one of the most deadly forms of heart disease known as sub-acute-bacterial endocarditis, an infection which occurs in patients who have rheumatic heart disease. Prior to the advent of penicillin this disease was practically always fatal. Almost one half of the cases of this infection developed after a tooth extraction or any other operation on the upper respiratory tract. Drawing upon recent medical research, The American Council on Rheumatic Fever, advocated that all persons suffering from rheumatic fever or rheumatic heart disease receive treatments of penicillin before having a tooth extracted or undergoing any

other operation on the upper respiratory tract. Bacterial endocarditis is a serious infection of the heart valves and is caused by one of the streptococcus germs commonly known as 'green strep' which is always present in the mouth and air passages. When a tooth is extracted, the bacteria enter the blood stream and grow on one of the heart valves previously damaged by rheumatic fever. If the patient receives penicillin prophylaxis prior to the extraction of a tooth or any mouth or throat operation, the disease can be prevented. Where this is not done and the disease develops, penicillin administered in large doses and over a long period of time, can cure the majority of cases.

"Members of the American Council on Rheumatic Fever, representing the medical organizations, public health agencies, social workers, and child care workers approve a policy calling for an informational campaign directed at physicians and dentists as well as the general public regarding the value of this preventive use of penicillin. Dentists will be urged to avoid extracting teeth of patients having rheumatic heart disease unless penicillin has been first administered. Physicians will be asked to cooperate in providing such treatments, and in informing parents of the need for penicillin therapy before any surgery is performed in the nose or mouth of the patient with a record of rheumatic heart disease".

I have taken a little extra time to give you these releases because of their extreme importance to us at this time in considering infections.

ANTIBIOTICS

In recent years, with the advent of antibiotics, there have been some changes in the management of infections, but the use of these antibiotics should not replace established surgical principles and carefully determined diagnosis. They should be used only on susceptible organisms and in adequate amount over a period of

time. In blood findings in patients before and after the extraction of teeth, investigators have found that positive blood cultures may be obtained six or more hours after an extraction of a carious and infected tooth. Other investigators have shown similar findings. Cases of acutely infected teeth should be given penicillin pre-operatively in adequate dosages to establish an effective blood level on the day before surgery and to maintain this level for two or three days post-operatively. To obtain and maintain an adequate blood level, about 30,000 to 40,000 units are required every three hours intramuscularly or a comparable dosage orally which is about four or five times the parenteral dose.

For some time the pure crystalline penicillin, consisting almost entirely of penicillin G, has been produced and used in large quantities. It is generally accepted that larger doses of penicillin, to obtain the higher blood levels, are more advantageous and that it is better to overdose than to underdose. The Romansky formula, penicillin in wax and oil consisting of 300,000 units and given each twelve hours has been found to maintain an effective blood level in the most severe systemic infection in adults. For children according to necessity, the dosage may vary, but 300,000 units each twenty-four hours usually maintains an adequate blood level for the most critical infections.

Recently, there have been many unfavorable reports regarding the use of the Romansky formula. In the injected region, some extensive local reactions have occurred. It has been suggested that reactions locally and systematically may be caused from the individual's intolerance to the wax-oil compounds and not the penicillin. As a consequence the pure crystalline penicillin in saline solution is most popular and it is continued to be administered every three hours parenterally in dosages of 30,000 units or more per dose to maintain an

adequate blood level. Depending upon the severity of the disease, doses of 500,000 to 1,000,000 or more units is not uncommon to give to patients at one time and repeating similar doses each twelve hours.

Considerable attention has been aroused in the latest use of a procain-penicillin-cottonseed or sesame oil preparation and a penicillin-oil-epinephrine preparation. These seem to be quite promising but as yet are not for distribution. No ill effects have been encountered and no irritation or residual oil has been found in the tissues by investigators. These preparations are suspensions and are administered in one cc dosages containing 300,000 units of crystalline penicillin. One dose daily maintains an adequate penicillin level for 24 or more hours. Other than the usual pain from the injection needle there seems to be no evidence of local irritation soreness or pain after the injection, as is not the case when using the wax-peanut or wax-sesame oil preparations. It has been found that procaine penicillin-oil or penicillin-oil-epinephrine combinations are satisfactory preparations for the prolongation of an effective penicillin blood level. To date, the materials seem to be entirely safe without evidences of any apparent toxic effects. There is evidence to suggest that these materials may have advantages over the other methods previously available for prolongation of the action of penicillin.

At the present time penicillin tablets for oral administration have been increased to 100,000 units per tablet. Larger tablets are expected to become available. It is recommended that the oral penicillin be given every three hours on an empty stomach a short while before meals and between meals. These buffered penicillin tablets given orally are assimilated approximately 20% to 25% of the total units administered. This is an effective method and the most easily administered

preparation for the dentist to prescribe.

We know that the sulphonamide preparations and penicillin are valuable drugs therapeutically. Their uses are to be encouraged but must be administered under supervision, observing the precautions that we all are familiar with, such as sensitization to the drugs, maintenance of adequate blood levels, and recognition of the symptoms of overdose.

For some time, the use of sulphonamide preparation in surgical wounds was lessened because residual masses of undissolved sulphonamide preparations often caused irritation to wounds or interfered with the healing processes. It has been found that smaller amounts of the finely granulated or powdered mixture, moistened with sterile water before insertion into certain wounds particularly in bone, will continue to dissolve in the blood and serum and act beneficially. In some tooth sockets, the commercial pure fine powdered sulphonamide cones or crystals are convenient to use, and no doubt they are beneficial. Sulphonamide, however, in the presence of procaine becomes inactivated and ineffective. Sulphonamide in such vehicles as petrolatum, wax, lanolin, or heavy viscid water soluble lipoids, is not considered of value in tooth sockets. It is best to moisten the cone or powder in sterile water just before insertion into a tooth socket. This same procedure may be applicable to the pure sulphonamide-penicillin cones available to dentists. There will be no undissolved powder remaining in the tooth socket if used moderately in this manner. The sulphonamide preparations for systemic use remain the same, as in the past, being given by mouth or intravenously, alone or in conjunction with penicillin and streptomycin where this is indicated. Streptomycin is being used quite extensively for certain infections and diseases, but where and how much benefit will be derived in infections of

the face and jaws, we still do not know. It is one of the most promising antibiotics of low toxicity. It is now freely available for regular routine use in hospitals. It is administered in dosages of 200 mg. per 1 cc solution at 3 hour intervals. It is commonly given in combination with penicillin and the sulphonamides for some resistant infection cases. Investigators are optimistic about further developments along the antibiotics field as investigation continues.

RIGHT OF DENTISTS TO ADMINISTER ANTIBIOTICS

There has been some question in the minds of many dentists as to whether or not members of the dental profession can legally prescribe and administer the antibiotic preparations. From the *Journal of the Dental Society of the State of New York*, June 1, 1946 reprinted in the Dental Items of Interest.

Quote: "In answer to many inquiries of our members as to whether a dentist may properly use penicillin, sulpha drugs and other recent innovations in medicine in the conduct of his practice, Mr. Charles A. Brind, Counsel for the New York State Department of Education, dated March 27, 1946, made the following statement: 'As I read the provisions of Section 1,300, which defines the practice of dentistry, it would appear that one who treats a deficiency, deformity, or physical condition of the human teeth, alveolar process, gums or jaws, and who shall either offer or undertake by any means or method to diagnose, treat, operate, or prescribe for any disease, pain, injury, deficiency, deformity, or physical condition of the same. The definition of itself, seems to answer the question. There is nothing in the definition which would prevent a dentist from using such a method or means as may be reasonably adjudged proper for the treatment, operation etc., of the mouth conditions as defined in the statute. This means,

I take it, that the dentists may utilize the above drugs either in the powder form or by injection if it is to treat the mouth conditions as indicated. I assume that in utilizing these remedies the dentist will have in mind the possible effects of their use and will certainly exercise caution in not using these drugs when the conditions do not warrant the same, but this latter is a matter of educational process which should emanate from the dental, and perhaps the medical profession. The taking of blood pressure readings and the use of the stethoscope would seem to be a precautionary measure designed to determine whether the dentist should proceed or refer the patient to a physician for treatment and, I believe, it is within the scope of the dentist's authority'."

When patients present themselves with infections as have been described, some general physical history should be obtained before treatment is begun. Consultation with the patient's physician in certain cases is also advisable. Knowledge of the general physical condition, the tolerance to antibiotics or any contra-indications to the otherwise usual treatment procedures, should be known in order to avoid untoward reactions or emergencies.

WHEN TO ADMINISTER ANTIBIOTICS

Some kind of routine in antibiotic therapy in the management of infection cases may be well to adopt. I have somewhat adopted a routine that has seemed to be rational and effective in the treatment of such cases.

In Group I cases, as previously described, antibiotics are not administered unless a history of previous rheumatic fever or other heart impairment has existed, or other organic disease, or some disturbing kidney condition exists.

In Group II cases, penicillin therapy is immediately instituted. This routine consists of administering oral penicillin 200,000 units, after which a

delay of about 2 to 3 hours is insisted upon before the infected teeth are extracted. When the patient has awakened from the anaesthesia, another 200,000 units of oral penicillin is given for a period of about 3 days, when the patient will have consumed about 24 to 30 tablets. Parenteral administration may be done if preferred to the oral administration. Penicillin in 1% procaine-adrenalin solution is excellent to use and results in less tenderness in the injected area, and slightly retarded absorption of the penicillin.

In Group III some cases are hospitalized while others are not. All of these cases are placed on a basis of 30,000 to 40,000 units each 3 hours, administered parenterally, or 100,000 to 200,000 units in tablets orally to maintain the 30,000 assimilated units level, until localization has occurred and surgical interference instituted. Then immediately post-operatively 500,000 to 1,000,000 units of penicillin is administered parenterally and this is followed and continued with 30,000 assimilated units level each 3 hours until the cellulitis is well subsided. Sulphonamide may be administered advisably in combination with the above dosages of penicillin to obtain the maximum benefits of antibiotic therapy, if this is felt necessary in extremely acute toxic infections.

In Group IV cases, administration of the antibiotic therapy is elective in the respective cases at hand. Prophylactic therapy is commonly carried on. In certain of these cases massive doses are administered parenterally along with the local treatment directly into the wound with the antibiotic if so desired. Where massive doses of penicillin or streptomycin are administered for the more resistant infection cases, parenteral injection is preferred.

SUMMARY

Acute infections of the face and

jaws should be considered emergencies but treated cautiously.

Introduction of contamination by unsterile instruments, particularly hypodermic injection needles, which may cause severe acute infections, should be avoided.

Extractions of teeth, in the presence of varying degrees of progressing infections, may be done safely when antibiotic therapy has been instituted and continued.

Incisions for drainage of localized infections in all regions should be done carefully, when indicated and such incision wounds should be kept open with ribbon gauze or rubber tube drains for a reasonable length of time depending upon the case and the subsequent healing.

General anaesthesia is preferred in the surgical treatment of the acute infections of the teeth, jaws, and face.

The use of antibiotics should be encouraged, and administered routinely in adequate, effective doses in the respective cases.

BIBLIOGRAPHY

- MILLER, HOWARD, *Prevention and treatment of Acute Infection Associated with Removal of Teeth*. Jr. O.S. Vol. 1-No. 1.—1943 P. 1.
- DINGMAN, REED, O., *Management of Acute Infections of the Face and Jaws*. Int. Journal of Orthodontia and Oral Surgery—August, 1939.
- AUSTIN, LOUIS T., *Relation of Dental Sepsis to Systemic Disease*. J.A.D.A.—Vol. 27, May, 1940.
- FAILLO, PHILIP S., *Blood Findings Before and After Extraction of Teeth*. Journal Dental Research—21: 19-26 February, 1942.
- WALDON, C. W., *Osteomyelitis of the Jaw*. Jr. O.S., Vol 1—No. 4 October, 1943.
- LINSEY, EUGENE V., *Osteomyelitis of the Jaw*. Dental Items of Interest, November 1946—Pp 1064-1072.
- MURRAY AND ASSOCIATES, *Case Report—Actinomycosis*. Journal of Lab. and Clinical Medicine—30: 475-558 June, 1945.
- PETERSON, ARTHUR F., William R. Warner & Co. Inc., New York, N.Y. Personal Interview.
- AMERICAN HEART ASSOCIATION, Release of October 4, 1946.
- AMERICAN HEART ASSOCIATION, Release of November 7, 1946.
- CHAS. A. BRIND, Jr. Dent. Soc. State of N.Y. June 1, 1946.
- HEPRELL, NICHOLAS, HEILMAN — *Procaine Penicillin G Duracillin Proceedings—Staff meeting Mayo Clinic* Vol. 22, No. 25 567-570 December 10, 1947.

Happiness grows at our own firesides, and is not to be picked in strangers' gardens.—Douglas Jerrold.

PRINCIPLES AND A METHOD OF BUILDING BALANCED DENTURES

by Frank L. Cole, D.D.S., and R. Lawrence Twible, D.D.S., Toronto, Ontario.

CLINICIANS have demonstrated techniques for the construction of complete dentures for many years; some have advanced the claims of certain articulators and some have based their results on materials alone. Others have given their best efforts without gain for the improvement of denture building. We all know that some materials and articulators give good results in some hands but all are not able to obtain optimum results with the same equipment or materials.

Complete artificial dentures are generally built to assist the patient to chew food and they must also look well. They should be comfortable and they should be efficient. However many problems do occur.

Today impressions of edentulous ridges are taken by various methods. There is the straight plaster impression, the all compound impression, and the latest so-called muco-static impression. Dayton Campbell says that he can take an impression using butter. I do not think that any one material can be used in every case and the examination and study of the case guides you to the best method of procedure.

Assuming satisfactory impressions a thorough understanding of the mucosa and the supporting structure of the arches is necessary so that in building dentures the health and form of these structures can be retained. The biologic forces which cause the resorption of the alveolar ridges cannot altogether be controlled, but dentures can be constructed so the resorption can be greatly minimized. We can do this by placing the occlusal surfaces of the artificial teeth on the base in correct relation to the ridges and to the muscles that support the mandible. This coupled with a good impression and a proper occlusal bal-

ance will assure success in complete denture prosthesis.

CORRECT OCCLUSAL BALANCE

A correct occlusal balance cannot be obtained without the following requisites:—

- a. Well adapted bases.
- b. Correct vertical opening.
- c. Correct centric relation.
- d. Approximate occlusal plane.

a. Accurate bases necessitate good impressions to obtain good casts and it is agreed by all that the largest area possible should be covered. The bases must rest firmly, evenly and closely on the mucosa of the mandible and maxillae during rest, mastication, and speech, and should not interfere at any time with the muscles of the mouth or the muscles of expression.

b. The second requirement of balanced occlusion is to obtain the correct vertical opening. We have one point from which to start. Many dentists decide the correct vertical opening by the facial appearance of the patient, but this necessarily depends upon his judgment and many errors are made especially in trying to make an older patient look years younger by opening the bite too much. Open the bite too far, and nature will attempt to return the jaws to their correct vertical dimensions by resorption of the alveolar ridges under the dentures. Neswonger¹ and Gillies² demonstrated that the position in rest relation is not lost when teeth are extracted but remained constant throughout life. They also maintain that the occlusal opening, when teeth are in contact, is from two to five millimetres less than the easily measured rest relation.

c. To obtain correct vertical opening place the upper bite rim in position and have the patient relax. Now request the patient to swallow and say

"m.m.m." several times. A relaxed lower jaw is evident. Another method sometimes employed is to have the patient open the mouth as far as possible for one minute and then close, letting the lips say "m.m.m." Having obtained this relaxed position measure the distance from the base of the nose to the bone of the chin and record the measurement. Now place the lower bite rim in position and measure. The occlusal vertical opening should be from two to five millimetres shorter than the rest relation, according to age.

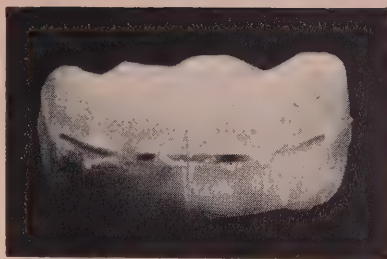
d. With the correct vertical opening established it is then necessary to determine the occlusal plane which is accepted as a plane parallel to a line drawn from the ala of the nose to the tragus of the ear. This plane, thus established, parallels the opposing ridges and is usually in a correct vertical opening except in the cases of mutilated or badly resorbed maxillary or mandibular ridges.

With the principles established in our minds we are prepared to proceed in building balanced dentures where we use the mouth as an articulator and correct gross errors occurring in the finishing of the dentures using an adaptable articulator.

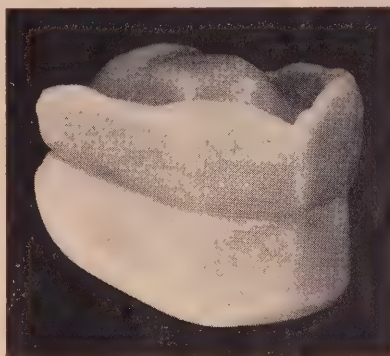
THE BUILDING OF BALANCED DENTURES

At the time the impressions are being taken, take a preliminary bite, with soft wax, in the shape of a horse shoe shaping for aesthetics in the mouth (Fig. I) with calipers measure the distance from the bone of the chin to the base of the spine of the nose which equals the distance from the corner of the eye to the occlusal plane. Mark this plane on the wax together with the angles of the mouth and the centre line. Transfer this preliminary wax bite, by means of a face-bow, to the articulator which must have an incisal guide pin. It is preferable to use a Hanau articulator as it can be used as either a straight line or an adaptable instrument.

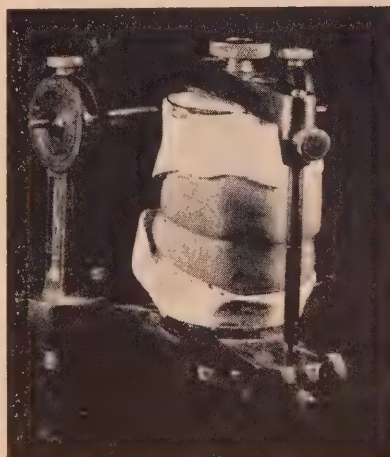
After the impressions have been



1.—Preliminary bite with occlusal plane marked and indentations for face bow.



2 a.—Contoured bite blocks.



2 b.—Bite blocks built on articulator ready for checking in the mouth.

taken, casts are prepared and mounted—cutting deep notches in the casts before mounting. Now bite rims are well adapted, using vulcanite or acrylic in preference or a resin base plate material may be used if it is corrected with wax or a zinc oxide paste.

Make the rims of very hard wax approximately one half inch wide in harmony with the occlusal plane as marked on the preliminary bite. For aesthetics the shape should be more or less rectangular with the cuspid area fairly sharp—the anterior segment being triangular for the tapering types, more square in the square types and rounded in the ovoid types. (*Fig. 2A and Fig. 2B*)

Try in upper bite rim and check for the correct occlusal plane as well as aesthetics. Mark centre line when the upper is correct for aesthetics.

Have the patient say "m.m.m." and when the lower lip touches the upper lip on the last "m." measure the distance from the base of the nose to the bone of the chin. This is the rest relation and it is constant throughout life. Place lower bite rim in the mouth. The occlusal relation should be from two to five millimetres (depending on the age of the patient) closer than the rest relation measurement, and the distance of the closure must be left to the operator's judgment.

Test the bite rims for occlusal plane relation and then approximate a slight compensation curve on the upper and lower hard wax by cutting wax from the buccal of the upper rim and the lingual of the lower and adding sufficient hard wax to the buccal of the lower and the lingual of the upper as needed. A template may be used to contour wax rims.

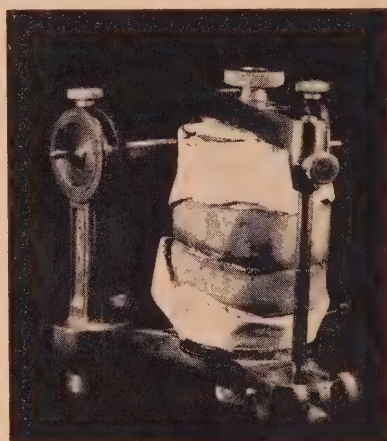
The bite rims are now approximate. Remove one and one half millimetres of the wax from the upper and lower rims distal to the centre line of the cuspid and replace with two millimetres of counter wax or equalizing wax. Cover the counter wax with tin foil, vaseline it and chill. (*Fig. 3.*)

Place both bite rims in the patient's



3.—Equalizing wax and tin foil on posterior of bite blocks.

mouth for five minutes to warm the soft wax. Then have the patient slide to the right lateral and to the left lateral and to the protrusive positions, keeping rims tight. Continue this until the hard wax on the anterior touches, then remove lower and warm tin foiled surface. Place the rims in mouth again and have patient slide in all three positions with the least amount of pressure possible. Staple together in the most posterior position obtainable by the patient. To check for correctness of this centric, fit a tracing pin to upper bite block and a flat plate to lower to obtain an arch tracing before stapling together.

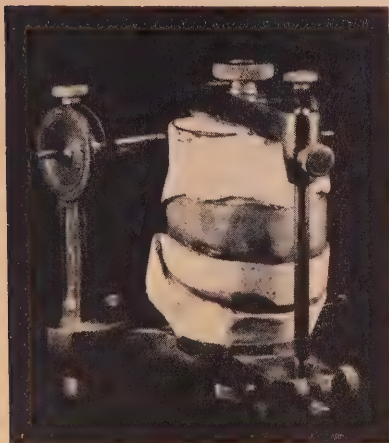


4.—Lower bite rim remounted on articulator and articulator adjusted to angles of waxed curve.

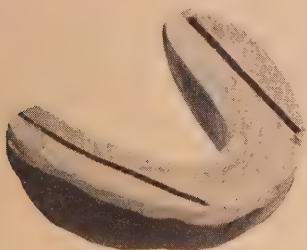
Remove the lower cast already on the Hanau articulator and re-articulate it to the corrected centric relation. The staples are then removed and the condylar guidance on the articulator adjusted according to the curve created by the patient in the soft wax. (Fig. 4.) Record the angles on the casts. With the case mounted, remove the lower bite rim and adapt wax on the lower cast to form a base for a rim of thick artificial stone, into which is pressed the upper curved bite rim reproducing the curve of the upper rim in stone. (Fig. 5A, Fig. 5B) The anterior line from cuspid to cus-

pid for procuring the upper anterior tooth line is also marked on the stone as a guide for selecting the upper anterior six teeth.

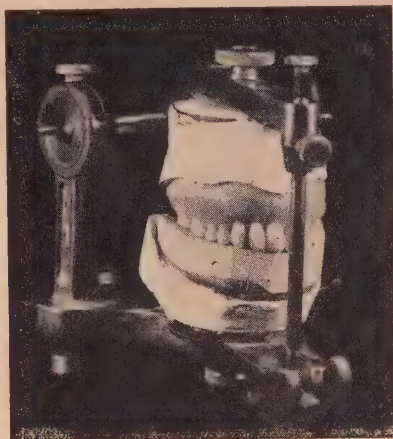
Set the upper teeth to the contoured stone, reducing the cusp height and marginal ridges and making sure that the buccal and lingual cusps touch the stone path. (Fig. 6.) Then set the lower teeth to the uppers. The lower anteriors should be set on the ridge so that the incisal edge is never anterior



5 a.—Upper bite rim against lower stone plane.



5 b.—Stone plane marked with centre of ridge outlined.



6.—Upper teeth set to stone plane.



7.—Lower teeth set to uppers ready for try-in.

to the periphery of the lower base. (Fig. 7.)

Try the waxed denture in the mouth and check this vertical opening from previous measurement you have recorded.

The aesthetics, balance and centric relation should also be checked and if there is any correction they should be made at this time.

Finish the upper denture and remount the cast on the articulator before polishing. Check with the stone plane and also with the lower teeth set in wax. (Fig. 8.)

Try in the finished upper and waxed lower. Test the vertical opening and

make needed corrections and finish the lower.

Allow the patient to wear dentures for twenty-four hours without using them for mastication. Then take a new centric and remount lower and grind the dentures in on the articulator using registrations recorded. The milling-in should be done in a circular motion, of not more than two millimetres lateral movement, using carborundum paste, and making sure that the bite is closed as little as possible by grinding. Have the patient chew carborundum glycerine paste for one minute. Remove and polish occlusal surfaces with rubber polishing wheels and then pumice and oxide of tin.

SUMMARY

Summarizing the main principles for satisfactory and comfortable dentures we find it is necessary:—

1. To have as near correct vertical opening as possible.
2. To have a method of recording this position.
3. To have the correct centric relation.
4. To have balanced articulation.

BIBLIOGRAPHY

1. Neswonger, J. of A. D. A. Rest Position of the Mandible or Centric Relation. Sept. 1937.
2. Gillies, (Establishing vertical dimensions.) Full Denture Construction J. of A. D. A. March, 1941.



8.—Teeth set up on simple articulator with a guide pin and hinge axis for face bow registration.

The authors wish to express their gratitude to Mr. G. H. Lofts, University of Toronto, who produced the photographs illustrating this paper; and to Dr. F. Myers and Dr. R. H. Kingery, whose writings were of great help in the preparation of the paper.

In the United States topsoil is estimated to lie originally at an average depth of about seven or eight inches over the face of the land. As nearly as can be ascertained, it takes nature, under the most favourable conditions, including a good cover of trees, grass or other protective vegetation, anywhere from three hundred to one thousand years or more to build a single inch of topsoil.

Yet what may have taken a thousand years to build has in places been removed by erosion in a year or even in a single day. Wherever nature's balance is too greatly disturbed, accelerated erosion occurs, and man is continually upsetting the balance of nature, because of what he considers his immediate need, not looking even a few years into the future; or because of ignorance or greed.—Fairfield Osborn.

God gave man an upright countenance to survey the heavens, and to look upward to the stars.—Ovid.

PARTIAL DENTURES

by the late J. FRANK GIFFEN, L.D.S., D.D.S., London, Ontario.

PARTIAL denture construction is, in my opinion, one of the most interesting phases of dental practice, and yet I believe it is one phase of dentistry where scientific thought and planning is most neglected. There is no field in which initiative and imagination can be used to a greater extent.

Partial denture construction is a responsibility of the dental profession and cannot be assumed by laymen. While technical assistance in the mechanical procedures of construction may be used to advantage, the designing of each individual case must be done by the operator himself, because he is the only one who possesses a knowledge of the biologic and physiologic laws governing the anatomic structures involved, and can apply them to the engineering problem of designing that particular case. There is no phase of dentistry that offers a greater opening for those who might wish to encroach upon the field of dental practice; the extent of this encroachment rests to a great extent in the hands of the dental profession.

What is a partial denture? A partial denture is a removable prosthetic appliance designed to replace a partial loss of natural teeth and contiguous tissues in a single dental arch. These appliances must be so scientifically constructed that they may function in harmony with all the tissues concerned.

To function in this manner, the appliances must be so constructed as to have the following characteristics,—

1. The saddles which are supported by the mucosa or by the mucosa in conjunction with the remaining teeth, must fit accurately and cover the largest possible area, so that when the intermittent force of mastication is transmitted evenly by the soft tissues from the saddle to the bone, it

will tend to stimulate the formation of a hard bony ridge.

2. Where the appliance is supported by the natural teeth, the saddles merely act as a means of preventing food from collecting underneath. The force is transmitted by the teeth from the occlusal rests to the bone, thus stimulating a healthy growth of tissue.

Although partial dentures offer great possibilities in the field of restorative dentistry, I sincerely believe that properly constructed fixed bridge-work should be used wherever it is physically or economically possible. I also believe that unless it is possible to construct a well-designed partial denture to reasonably adhere to the biologic and physiologic laws governing the anatomic structures involved, it would be wiser if no attempt at restoration be made.

HISTORY OF PARTIAL DENTURE RESTORATION

In considering this phase of dentistry, it is interesting, and beneficial to turn back the pages of history, so that we may have a better knowledge of the gradual development, and be the better enabled to recognize the fundamental principles involved. Many of the devices used in the early years seem to us intolerable and yet, as we view many restorations in the mouths of patients today, it makes one wonder how much we have made of the heritage that has been given us.

The first mention of a partial denture restoration is that of Heister, in 1711, when a block of bone or ivory was carved to fit the mouth. An impression technique or the use of models was unknown. In 1728, Pierre Fauchard, the father of modern dentistry, published the first scientific dental work. He describes the construction of a partial restoration using a labial and lingual connector. In

1746 and 1757, Mouton and Berdet describe the use of a gold retentive clasp adapted to the teeth. Prior to 1810, Emile Gardette of Philadelphia, describes his use of a wrought band clasp. Delabarre, in 1817, refers to the use of hooks. In 1847, Descrabode referred to round and half round wire, as well as plate, "whose bent extremities serve to fix to solid teeth." Even at this early time, grave concern was felt regarding the irritation around the abutment teeth, and Delabarre suggested that "little spurs" be used on the clasps, in reality occlusal rests. The appreciation of the value of the occlusal rest increased from 1817 to a climax in 1916, when James H. Prothro advocated the placement of disto lingual inlays in cuspids, in which he placed a round bottomed groove in which the occlusal rest functioned. Bonwill, in 1893 stated, that the occlusal rest was an absolute necessity.

It is unnecessary for me to mention the more recent workers in this field such as F. E. Roach, W. E. Cummer, Edward Kennedy and many others who have made valuable contributions, but it would be as well for us to make a thorough study of their works.

Since it is beyond the scope of this paper to discuss the survey of the case to be considered, it will be sufficient to say that a thorough survey is indispensable. This should include the use of study models, x-rays and clinical examination.

CLASSIFICATION OF PARTIAL DENTURES

Partial dentures may be classified according to the nature of their support, as tooth borne, tooth and mucosa borne or mucosa borne.

This classification is governed by the arrangement of the remaining teeth, where there is a great magnitude of possible combinations. Cummer has told us that, "in either the upper or lower jaw there can be 65,536 cases." Because of these complexities, it has been necessary to search for some classification sufficiently limited

to come within the range of usefulness.

The classification I have found most practical is that formulated by the University of California School of Dentistry. In this classification they have eliminated the classes that may be termed deferred full denture cases, the cases that occur infrequently and the cases definitely requiring fixed bridgework, and have concentrated upon the biologic and physiologic standpoint of impaired function of an organ, the possibilities of the attempt to compensate for lost function by the use of a removable appliance, and its definite limitations. As a result of this, the design of the various types of cases will consider the functional efficiency as the most essential.

The separate groups comprising the classifications are as follows,—

Class 1. Bilateral posterior spaces, remaining teeth in a segment in the anterior area,—

They have found this class to contain about 45 per cent of the cases for partial denture construction. In this class we have to depend largely, through necessity, upon the mucosa for support in mastication. This cannot be otherwise, since the remaining teeth are anterior to the main area of mastication. It rests with the judgement of the operator as to whether the case is made to be entirely supported by the soft tissues or whether he makes use of what support he can from the remaining teeth. In my own experience it has proven most satisfactory to utilize all the support possible from the remaining teeth.

The function restorable in this class is limited, speech is not often greatly affected by the loss of the posterior teeth, but if it is, that can be corrected. The posterior teeth play an important part in maintaining vertical dimensions, this can be restored, but maintained, with difficulty. The demands of masticating efficiency cannot be met adequately by this type of partial denture, because the supporting tissue can bear only a portion of the avail-

able muscular force without discomfort and injury to the underlying tissues.

We might therefore say, that while this class contains nearly half of the cases we are called upon to construct, it is perhaps one of the least efficient in restoring the normal functions. The comfort and satisfaction of the patient rests upon our ability to properly design and execute the appliance.

Class 2. Bilateral posterior spaces, one or more teeth at the posterior of one space,—

This class occurs less frequently than the first, although it does include a wide variation in the number of the remaining teeth and their location in the arch.

The appliance indicated in this class is one almost entirely supported by the natural teeth on one side due to the small saddle area, while on the other side it must of necessity be either supported by the mucosa or by a combination of both.

The function restorable in this class is greater than that of the previous one, owing to the fact that more positive support is available at both ends of one space. This is the side on which the patient will do most of his mastication due to this more positive support.

Class 3. Bilateral posterior spaces, one or more teeth at the posterior of both spaces,—

There is much variation in the arrangement of the remaining teeth in this class, numerically it is not very frequent. If the spaces are not too great, and the remaining teeth are such that they can be used, I believe that fixed bridges are the proper solution. However, in some cases the spaces are so great and the remaining teeth are of such a nature that they will not support fixed bridges, so that we must resort to some form of partial denture.

Due to the small saddle areas it is imperative that the appliance must be so constructed as to be almost entirely supported by the remaining teeth, the

occlusal rests should be exceptionally strong so as to withstand the stress of mastication to which they may be subjected.

The possibility of restoring function in this class is greater than in most classes, since the appliance can be almost entirely tooth borne.

Class 4. A unilateral posterior space, with or without teeth at the posterior of the space, the arch unbroken at the opposite side,—

In this class as in the former, if the space is short, with a tooth posteriorly, fixed bridgework is the best choice of restorations, and will almost completely restore lost function, but since we are discussing partial dentures, we must consider those with either long spaces with teeth on the posterior end of the space, or without teeth at the posterior end of the space. Here, we must have a combination of tooth and mucosa support and in most cases it is necessary to cross to the opposite side of the arch for some transverse bracing effect.

The function restorable in this class is very limited, because most of the mastication will be done on the opposite side where all natural teeth are present. The main function of the appliance will be to maintain the vertical relation of the opposing teeth.

Class 5. Anterior space only, posterior part of the arch unbroken on either side,—

In this class I will refer to cases in the anterior.

I believe we must again resort to a combination of tooth and mucosa support. Most of the posterior teeth should be utilized for a longitudinal bearing effect. Clasps and occlusal rests must be so constructed and placed as to resist the tilting effect of the anterior teeth. The saddles should cover the largest possible area.

The main function of the anterior teeth, namely,—the incision of food masses, is not very efficiently restored, due to the strain on the abutment teeth, and the stress on the tis-

sues supporting the saddle. The secondary functions, namely,—speech and aesthetics, may be almost completely restored.

Class 6. Irregular spaces around the arch, remaining teeth single or in small groups.

I have always harboured grave doubts as to the advisability of a partial denture in this class. My preference would be a series of short fixed bridges. However, a partial denture with a succession of clasps and occlusal rests joined together with bars may be used, where it is not considered expedient to mutilate so many teeth for fixed bridge abutments. Almost any other type of removable restoration can be considered only as deferring a full denture.

It is possible to restore almost complete function in this class.

In addition to the above classes, it is possible to have a combination or blending of classes, for example, in Class 1, there might be one or more anterior teeth missing, and while this would require additional details in design, the essential character of the case would remain the same.

BIBLIOGRAPHY

1. Girardot, Raymond L.—History and Development of Partial Denture Design. J.A.D.A.; 28, 1399. September, 1941.
2. Mauk, Edwin H.—A Classification of Mutilated Dental Arches Requiring Treatment by Removable Partial Dentures. J.A.D.A.; 29, 2121.
3. Jordan, Luzerne G.—Partial Dentures. J.A.D.A.; 29, 169. February, 1942.
4. Flagstad, Carl O., Elliott, Fred C.—Problems in Partial Denture Service. J.A.D.A.; 29, 1822. October, 1942.
5. Guerini,—History of Dentistry.

ANNOUNCEMENTS

Montreal Fall Clinic

The 24th Annual Fall Clinic under the auspices of the Montreal Dental Club will be held at the Mount Royal Hotel, October 27 - 29, 1948.

Dentistry 1923

This notice is for the attention of all Canadian dentists who are graduates of the class of 1923. To remind you—this is the 25th anniversary of your graduation—the only such one you will ever have. To help you suitably celebrate it as a unique mile-stone in your career, a special '23 dinner is being planned to be held during the Canadian Dental Association Convention at Murray Bay, Que., June 20 - 24.

The undersigned will welcome an intimation that you plan to attend and any suggestions you may have to aid in commemorating this event.

EDWARD T. BOURKE,
Henry Birks Bldg., Montreal 2, Que.

Public Health Dentists

It is proposed to hold a meeting of Canadian Dentists who are actively interested in the field of dental public health during the 1948 Convention of the Canadian Dental Association at Murray Bay, June 20-24.

The object of such meeting will be to discuss the possibility of organizing an Association of Canadian Public Health Dentists.

Anyone desiring information respecting this meeting should write:

DR. HUGH R. McLAREN,
211 Huron Street, Toronto, Ont.

A COMPACT PROCESSING UNIT FOR DENTAL RADIOGRAMS

by M. ZIMMERMAN, D.D.S., Toronto, Ontario.

THIS equipment and method offer the following advantages: Occupies less space; takes less time in the darkroom; ensures against any air bubbles producing blank areas on the film; eliminates any splashing of chemicals on clothing or bench; equipment is always clean—no chemical spots; because of small quantities used, you can economically use fresh developer every time; no damage to film by clips; ease in regulating temperature of the developing solution; and mounting may be stopped at any time, and continued whenever convenient by simply placing the cover on the tank.

The equipment used is an adjustable rollfilm developing tank, made of vulcanite. The cover is light-tight and has a built-in funnel and pouring spout. The films are mounted on an inner spool containing a spiral groove. This spool can be adjusted accurately, to hold the films on their longer dimension, and will hold 36 (Johnston's) or 60 (Fedco) films. A corner of the film can be bent slightly to make it stay tight in the groove. The entire process is one of bringing the solutions to the films, instead of putting the films into the solutions. (*Fig. 1.—Fig. 2.*) The steps are:

1. Stack the packets in alphabetical order, according to the patients' names, A down to Z.

2. Make a list, for example—Allen—4; Brown—2; Jones—14; Smith—4; Zander—10.

3. In the darkroom, remove the film from each packet, in turn, and holding it across the edges between the thumb and forefinger of the left hand, feed it into the spiral groove by turning the spool with the right hand. Each film will go around until it comes edge-to-edge with the preceding one.



Fig. 1

Fig. 1.—The processing unit, Bottle of fixing solution and capsules containing developer chemicals if liquid developer concentrate is not used.



Fig. 2

Fig. 2.—The processing unit showing its parts before assembly—the tank, the spool showing spiral grooves, the cover showing funnel and pouring spout, and the stirring rod to spin the spool in the solution.

4. Place spool in the tank, put on cover. From this point on, the dark-

room is no longer required. The processing may be done in broad daylight; it may be postponed for any other time if desired.

5. Developing—12 ounces of solution are ample for the smaller tank, 15 ounces for the larger. Take the temperature of the solution, regulate if need be, and pour it into the tank. The construction is such that solutions run down a tube to the bottom and *rise up* through the films, thus making sure there will be no air bubbles, and full contact of solutions with the films.

6. When time is up, according to the time-temperature scale, pour out the developer, place the tank under a

water-faucet, and wash water through the funnel and out of the spout for 30 seconds.

7. Pour out the water, pour in the fixing solution, leave for 10 minutes, pour back into bottle. Fixer may be used a number of times.

8. Under the water-faucet, wash for 20 minutes, empty the tank of water, remove cover and set up spool to dry.

Films may be removed while wet and placed on a towel to dry, or (better) dry on the spool. When dry on the spool, remove and mount immediately, using the key list to distinguish the patients' films.

773 BATHURST STREET

ANNOUNCEMENTS

Ontario Dental Association

The eighty-first annual Convention of this Society will be held on May 17, 18 and 19 at the Royal York Hotel, Toronto. Those planning to attend are invited to arrange hotel accommodation and register as early as possible with the Secretary of the Association at 86 Bloor Street West, Toronto.

Eastern Ontario Dental Association

The Convention of this Association will be held on September 19, 20 and 21 at the Chateau Laurier in Ottawa.

Northern Ontario Dental Association

The meeting of this Association will be held in Haileybury on Saturday, September 11.

Members are invited to note the date now.

Alpha Omega Fraternity

The "Annual Closing Dinner" of the Alpha Omega Fraternity will take place Monday, May 17 at 6.30 p.m. in the Library, Royal York Hotel. Speaker: —Mr. H. A. Mowat.

M. ZIMMERMAN.

National Convention of Canadian Dentists

MANOR RICHELIEU, MURRAY BAY, P.Q. June 20-24

ESSAYISTS

DR. GEORGE G. EXNER	London, England
"Modern Minor Oral Surgery"	
DR. H. HILLENBRAND	Secretary of A.D.A.
"The Future of Dentistry"	
DR. PHILIP JAY	University of Michigan
"Dental Caries"	
DR. LEROY MINER	Boston, Mass.
"Penicillin and Streptomycin"	
DR. KURT THOMA	Harvard University
"Comparison of the X-Ray and the Pathological Findings in the Surgical Diseases of the Mouth"	

CLINICIANS

DR. H. M. CLINE	Vancouver, B.C.
"Gold Foil Fillings"	
DR. R. J. GODFREY	University of Toronto
"Scientific Planning and Construction of Removable Partial Dentures"	
DR. PAUL GEOFFRION	Montreal University
"Orthodontia at the Disposal of all Dentists"	
DR. JAMES MCCUTCHEON	McGill University
"Full Dentures"	
DR. PRESCOTT MOWRY	McGill University
"Dental Therapy needed by most Patients"	
DR. J. KREUTZER	Toronto, Ont.
"Amalgams"	
DR. CHARLES MORGAN	Georgetown Medical and Dental Schools, Washington D.C.
"Sulphonamides and Antibiotics"	
DR. H. H. PEARSON	Montreal, Que.
"Endodontia for the General Practitioner"	
DR. HYMAN PINES	New York University
"The Porcelain Jacket Crown"	
DR. J. P. TROTTIER	Montreal University
"Gold Inlays"	

FILMS

The Correction of Prognathism: 16 mm. Coloured	30 Min.
DR. JOSEPH E. SCHEEFER, M.D., D.D.S., Chicago	
Pentothal Sodium for the Ambulatory Patient: 16 mm. Coloured	45 Min.
DR. EDMUND ROBERTS, Newark, N.J.	
Immediate Root Resection: 16 mm. Coloured	35 Min.
DR. LOUIS GROSSMAN, Univ. of Pennsylvania	
Functional Immediate Dentures: 16 mm. Coloured	40 Min.
DR. STANLEY G. STANDARD, New York	
Preparations of Abutment Teeth for Full Cast Crown with Inter-changeable Facings. Operative Procedure for Practical Upper and Lower Precision Dentures constructed with Precision Attachments: 16 mm. Coloured	30 Min.
DR. DAVID GROSSER, Boston	
Osteotomy of Head and Neck of Condyle for correction of Ancylosis of Temporomandibular Articulation: 16 mm.	25 Min.
DR. HARRY SELDIN, New York	
Root Canal Therapy: 16 mm. Coloured	40 Min.
DR. ROBERT KESEL, Chicago	
A New Method of Internal Wire Fixation of Fractures of the Jaw: 16 mm.	15 Min.
DRS. FRANK MCDOWELL AND JAMES BARRETT BROWN, St. Louis	
A Simple Technique for Root End Resection: 16 mm. Coloured	12 Min.
DR. ROBERT FISCHER, New York	
Matrices: 16 mm.	25 Min.
DR. WALTER J. PELTON, Denver	
The Removal of a Maxillary Cyst: Coloured	20 Min.
DR. ROBERT FISCHER, New York	
Cysts of the Jaw: Coloured	15 Min.
DR. M. J. BOYER, Union City, N.J.	

The Forum

IS A "RECESSION" IN DENTAL PRACTICE INEVITABLE?

Condensed from Editorial in N.Y. Jour. of D., March, 1948.

According to the Department of Agriculture, the total savings is another interesting question. A mere 10 per cent of the population holds 60 per cent of all the savings, while 50 per cent owns only 3 per cent of the savings. Less than a third of the families in the United States, according to the Federal Reserve Board, have incomes of \$3,000 a year, while 70 per cent of the families respectively have less than \$60 a week aggregate income. About 30 per cent of American families saved nothing at all of their income in 1945, a top income year. It appears then that besides having more things to spend their money on, the public does not really have as much as was generally believed.

The Bureau of Medical Economic Research of the American Medical Association reported recently that of the total amount spent for health care between 1929 and 1945, less was spent for medical and dental care during 1945, a war year, than in 1929. The proportions of the health care dollar for the two years were:

	1939	1945
Medical Care	.32c	.27c
Dental Care	.16c	.13c
Drugs	.20c	.23c
Hospital Care	.13c	.16c
Other	.19c	.21c

\$1.00 \$1.00

It is clear from the foregoing that while private dentists and private physicians are receiving less and less of

the health dollar, the drug stores and hospitals are in turn receiving more. For some time past, economists have expressed fear of a recession, if not immediately, then at least in the near future. The question is whether recession in dental practice is inevitable or if dentistry can escape recession and continue to render service to the public.

The American Dental Association through its Council on Dental Health has given a great deal of publicity to the dental needs of children. We are not aware that these needs have as yet been filled. There is no reason why with federal, state and local communities interested in the health of school children, these needs should continue to be neglected.

We are now beyond the survey stage in dealing with the dental problems of children. Health surveys and dental health educational procedures which stop short of service programs have long proved to be practically useless. It was pointed out recently by Katherine R. Lenroot, Chief of the Children's Bureau, that in one rural area alone, out of 213,500 children with defective teeth who were surveyed and exposed to dental health educational propaganda, only 7,452 had actually received treatment.

The method of paying for health service is an economic problem of the community and of the individuals concerned. It certainly is not the direct or special concern of the dentist himself.

On the other hand, continued and increasing dental neglect in the mouths of children and idle chair hours in dental offices are most certainly the concern of dentistry.

As we see it, continued dental care

at stated intervals, which makes it impossible for dental deterioration to gain headway, whether paid for directly by the patient or some other agency, is the logical method for reducing the cost of dental service.



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THE PATIENT'S DILEMMA

"Can't you bend a little in front?"

The men whom I have seen succeed best in life have always been cheerful and hopeful men, who went about their business with a smile on their faces, and took the changes and chances of this mortal life like men, facing rough and smooth alike as it came.—*Char. Kingsley.*

NEW ANATOMICAL VIEWPOINT ON MANDIBULAR ANAESTHESIA

by DR. A. G. KOESIS

Summary of paper in the Hungarian Medical Journal and Public Health Journal

FIG. 1.



FIG. 2.

In more than 700 mandibles examined by the author it was found that in 70 per cent of the cases there were accessory foramina with a diameter of 0.1 to 0.5 mm. In Fig. 1 and Fig. 2 metal wires have been introduced into

these canals which often reach the mandibular canal or the root of the posterior molar tooth. It is supposed that blood vessels and nerves might exist in these foramina which nerves might not be reached by the usual technique for mandibular anaesthesia.

THE COMMON COLD—A PRACTICAL SUMMARY

by CLARIE BERGERON, R.N.

Industrial Consultant for the Library Mutual Insurance Co. of Atlanta, Georgia

Condensed from the Jour. of the Am. D. Hygienists' Assoc.

The common cold is a most democratic disease striking virtually every inhabitant of the United States at least once a year. It costs the American public more than a billion dollars a year, and with its associated complications, such as sinusitis and tonsillitis, constitutes the major cause of absenteeism in industry. Statistics show that more colds appear on Monday than any other day. The assumption here is that actual exposure occurred during the week-end. Strenuous athletics, irregular meals, and upset schedules all have some bearing on these Monday morning colds. Some

students have gone so far as to recommend shorter vacations and moderated programs for week-ends.

Whether a cold actually develops may depend on the presence of pathogenic organisms and the individual's resistance. The causative agent is now generally thought to be a filterable virus.

In view of the fact that no definite treatment has been discovered we must strive to utilize the most effective measures of control which have been found useful.

Adequate ventilation is essential. This is based on the assumption that

the infection is both air-borne and also short lived under aerobic conditions.

Ventilation without draughts is also essential. Draughts constitute a form of chilling.

Ultraviolet light sterilization has been found useful in industry. A reduction in the number of upper respiratory infections has definitely been found.

Air sterilization may be accomplished with propylene sprays which have proved beneficial when proper conditions of humidity are constant.

Oiling of floors is another method of reducing dust counts.

Adequate rest is a well tried measure of treating almost any disease.

A well balanced, satisfying diet is another essential though no rule can be laid down as the various factors of age, sex, type of occupation, environment and physical status make each person's need different. Other things being equal a consistently normal weight which varies only slightly, a general feeling of well being are two criteria which give assurance that the diet is adequate. Recent publicity stresses the fact that a good breakfast eaten slowly is worth more than a few minutes' extra sleep.

Daily outdoor exercise is a suggestion to which many individuals are not partial—particularly after a long working day. Walking to or from employment (or part of the way if not practical to walk all the way) will take the place of more strenuous exercise. Adequate ventilation of the lungs is accomplished by the moderately strenuous exercise of walking in the fresh air.

Personal cleanliness need hardly be stressed as soap and water in generous quantities still remain a strong bulwark against infection of all types.

There are some people who require individual medical attention to remove causes of repeated upper respiratory infection. Surgical treatment of hypertrophied tonsils, lymphoid tissue and

chronic sinusitis is sometimes indicated.

Isolation of the patient is especially valuable during the early stages. If you are conscious of dryness and burning sensations in the back of the nose and throat a steam kettle or vapourizer may be used, often with success.

The use of face masks which are washable can be helpful in reducing cross infection and spreading of the cold. Paper handkerchiefs are a good item of individual hygiene, preventing the person from reinfecting himself. Extra fluids within reasonable limits are commendable (up to three or four glasses a day). Fruit juice supplies additional vitamin C. Excessive fluids however, may only hinder the natural physiological functions and possibly retard recuperation.

Hot baths and bed rest are two simple remedies which provide warmth and relaxation. The hot bath tones up the circulatory system. Bed rest during the acute and infectious state not only benefits the patient but provides a form of isolation.

Aspirin is a widely used drug supposed to combat the fever and generalized aching which often accompanies a cold. Some individuals are sensitive to aspirin and should ask their physicians for a substitute. Nose drops, too, should be approved and prescribed by the physician according to the patient's particular need.

There are some household remedies (or advice given freely by the unqualified) which are of doubtful value. Alcohol is one of them. In some people it does aid in re-establishing circulation but in others it causes congestion. Excessive use may predispose to pneumonia.

Special diets have not been found which will cure or prevent colds. The salicylates, beyond making the patient more comfortable, do not influence the course of the cold. Proprietary cold tablets or rhinitis pills are sold everywhere. Most contain atropine

which dries the secretions of the nose and throat. Thus symptoms are temporarily relieved but only at the expense of further interfering with the microscopic hairs of the mucous membrane known as cilia.

Sodium bicarbonate is a widely used remedy but there is no scientific basis for taking it. Woolen underwear is another favourite, especially with the oldsters. Wearing suitable clothing according to changes in the weather is a much more sensible precaution than heavy underwear.

Cathartics, once prescribed routinely, are no longer used in the treatment of colds. Studies done on groups bear out this finding. Constipation may be caused by the cold but its relief will not cure the cold.

Vitamins were at one time hailed as a panacea for colds as well as everything else. Where no vitamin deficiency exists there is no reason to believe that an additional dosage will give protection against colds.

Cold vaccines have, up to the present time, not proved of much value.

After briefly viewing the over-all economic picture and making his own deductions, the dentist may turn to the affairs of his own world and feel reasonably comforted. In the first place, we know that we have an unlimited market. We know that the need for our services is beyond our ability to fulfil. It is true that with a general economic retardation or with greater inflation there will be buyers driven from the market for dental services. But there will always be enough buyers for dentists to make a steady and certain living. In the second place, our labour market is satisfactory. We are not plagued by work stoppages in our own offices and only occasionally are we delayed by such conditions in the laboratories and the industries. Third, we are blessed with independence. We may set our own hours of labour and control our own working conditions. We establish our own fee scale without dictation from any quarter. We enjoy a flexibility of action that is not inhibited by the fear of discharge or technologic unemployment. We will always have a job and there will always be people in need of our services.

Dentists should be prudent. They should buy and sell wisely; they should save steadily. There is, however, no need for us to develop economic fears. When the general price level goes up our fees should keep pace; when the general price level recedes our fees should be reduced proportionately. These adjustments are made by us without recourse to any government agency, union, or trade association. This is another advantage in our economic independence. Dentistry is steady. We neither rise to great wealth nor dip to deep poverty. Come wars, draughts, recessions, presidential election years—we always make a good living.—From Editorial in Oral Hygiene, March, 1948.

It is clear that a paper carefully written for the sake of students who will examine it, each by himself at his own speed, cannot be meant to be read aloud to a group of other men, however attentive the latter may be. To read aloud in public a paper meant to be scrutinized quietly in one's own workshop is just as foolish as it would be to paint dainty miniatures on the surface of large walls. The walls call for broad frescoes; and so do listening audiences wait for general outlines, which they can understand and assimilate at once, not for microscopic analyses which they are unable to follow.—Geo. Sarton, in The Scientific Basis of the History of Science.

He who would do some great thing in this short life must apply himself to work with such a concentration of his forces as, to idle spectators, who live only to amuse themselves, looks like insanity.—Parkman.

LEISURE*Editorial in Jour. of D. Association of South Africa*

The dental practitioner above all classes of professional men needs to plan regular periods of rest and recreation. No other professional man is subjected to quite the same degree of severe physical and mental strain. A high degree of concentration is required whether it be at the chairside, in the laboratory, in the study of models for prosthesis or orthodontia, in the soothing of the nervous and the fractious, in the handling of different elements on his staff and in the more general strain of practice organization. This high degree of nervous strain takes its toll of our members every year.

That being so, how many of our professional colleagues give time and thought to proper rest, to correct recreation or to any particular care of their bodily health? At this season of the year our thoughts turn naturally and readily to the annual vacation.

The only time the average dental practitioner does any recreational planning at all is when he plans his annual leave. Whether it be a trip to the game reserve, a motor or caravan tour of our country, a holiday at the seaside with boating, fishing, golf, tennis and so forth, prospectuses are consulted and timetables for once drawn up. But this annual planning is not enough.

Daily and weekly rest and recreation require thought and consideration. Firstly the daily routine should be properly planned. The surgery or office should be reached twenty to thirty minutes before the first appointment. This permits the practitioner to study his appointment books and plan his campaign for the day. Similarly the last appointment should be made early enough to enable the practitioner not only to complete his entries but to enable him to reach home at least an hour before the evening meal. During the day too, proper intervals for tea and the mid-day meal will go far

towards preserving his nerves and in maintaining his general health.

An important aspect which should be dealt with—perhaps the most important of all—is that of planning his daily diet with at least as great a care as he outlines the diet of the expectant and nursing mother, the infant and the growing child and for his patients in general. In addition he should for a short spell do gentle exercises, such as deep-breathing to counteract the unnatural posturing which he assumes during his daily duties and which result in so many of the occupational diseases to which the dental surgeon is particularly vulnerable.

When we discuss weekly planning, how often are we not told, "I am too busy to take off a mid-week afternoon?" If these gentlemen would only stop to think how much they would be saved if they reconsidered this matter. A regular break mid-week would enable the practitioner to pursue his vocation with greater concentration for the rest of the week and it is a moot point as to whether this "sacrifice" of three or four hours weekly will effect his annual "output" to any adverse degree whatever. The probability is that his earning capacity will be increased. This will be agreed to by colleagues who *do* take off an afternoon mid-week and who make a proper and restful use of this break and do not use it to indulge in a form of celebration and subject themselves to undue physical and bodily strain. Games should be indulged in a light hearted manner and moderation practised in the club house!

A break at mid-week has more to recommend it than the practice of not working on Saturday mornings. This long "week-end" is often a snare and a delusion. Men are trapped into doing long trips to neighboring holiday resorts where they are tempted to play too hard and arrive home on the Sun-

day night scarcely in a fit condition to face the rigours of a Monday morning.

South Africans are too prone to spend their leisure in the ardent pursuit of sporting pastimes which in

themselves are played under a strain which produces no restful effect. The benefit of some quiet hobby, leisurely hours in the garden, country walks and gentle sports such as fishing (where local conditions are suitable) cannot be too greatly stressed.

SOME SUPERSTITIONS AND BELIEFS REGARDING THE TEETH

by the Scientific Editor

Condensed from Jour. of the D. Assoc. of South Africa

In a country such as South Africa, with an indigenous population that still believes to a great extent in witchdoctors and sorcery, and an exotic population drawn from the four corners of the earth, it would be odd if superstitions and strange beliefs were not common. Add to these circumstances the fact that a large proportion of the populace is truly rural, and you have all the ingredients necessary for fanciful thought.

Needless to state, certain strange beliefs and practices have the teeth as their focal point down through the ages.

Undoubtedly the commonest of all beliefs is that concerning the mouse in relation to the teeth. The story is told in two ways. The first version is to the effect that if the lost "baby" tooth is placed in the child's shoe on retiring to rest the mouse will come during the night hours, remove the tooth and provide the child with a new tooth of undoubtedly better quality. The second version is told by less provident parents, or the parents of more fractious children. It is to the effect that the mouse removes the tooth from the shoe and replaces it with a coin. The value of the coin is in direct proportion to the fractiousness of the child.

Less common than the beliefs which involve the mouse is the theory that if a lost deciduous tooth is thrown into a fire its replacement by a new tooth is assured.

It is by no means an uncommon practice, during teething, to suspend

a small bag from the neck of the child so that it rests on the chest. In this bag is placed some herb or drug, the object of which is to facilitate the teething process and to safeguard the child against convulsions. The most commonly used substances are camphor and the leaves of the wormwood shrub.

Dreams play an important part in all superstitious beliefs, and the teeth in turn play an important part in dreams. To dream of teeth at all is considered unlucky by some. Others believe that it is unlucky only if it is dreamt that a tooth is being taken out. Again, while to some the ill luck is merely of a general nature, there are those who believe that to dream of a tooth being removed signifies misfortune of a specific kind, namely, the death, of a relative. This superstition concerning the teeth in relation to dreams is common throughout Europe and in Japan. Many actually specify that to dream of an upper tooth being taken out indicates the death of an aged relative, while the removal of a lower tooth presages the death of a young relative.

There are still people in South Africa who will not have a tooth extracted or nails or hair cut on a Friday.

Gold in the mouth is considered of therapeutic value. The fact that this belief is most commonly met with among the Malays and Cape Coloured folk leads the writer to believe that it reached these shores from Java, where the superstition has been held since remote times.



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Editorial

SEMINAR OF AMERICAN ACADEMY OF PERIODONTOLOGY

In 1914 a group of dentists met in Cleveland, Ohio, to consider ways and means of stimulating greater interest in the supporting tissues of the teeth and their relation to oral and general health and to keep dentists in touch with research being carried on in this field and related sciences. To this end the American Academy of Periodontology was formed, the first regular meeting being held in Washington, D.C., later in 1914, with Dr. Austin F. James of Chicago as President. This Academy has met yearly since then usually just before the annual convention of the American Dental Association. The Academy also publishes a journal known as the Journal of Periodontology, the able Editor-in-Chief being Dr. Grace Rogers Spalding of Birmingham, Michigan, and the Associate Editors being Doctors Arthur H. Merritt and Harold J. Leonard of New York City and Dr. Celia Rich of Nashville, Tennessee. This Journal is the official organ of the Academy and contains those papers of scientific and clinical interest which are presented at the annual meetings of the Society, together with other very valuable material on periodontal subjects.

For the past eight years the Academy has held an annual postgraduate seminar for its members. The Eighth Seminar was held April 12-14 at the Centre for Continuation Study in the University of Minnesota, Minneapolis, sponsored by the University School of Dentistry and the W. K. Kellogg Foundation Institute.

The program consisted of the following:—"Importance of Controlled Studies in Clinical Research", by Ruth Boynton, M.S., M.D., Professor of

Public Health and Director of the Students' Health Service, University of Minnesota. "*The Effect of Smoking Cigarettes and of Intravenous Administration of Nicotine on the Electrocardiogram, Basal Metabolic Rate, Cutaneous Temperature, Blood Pressure and Pulse Rate of Normal Persons*," by Grace M. Roth, M.D., Mayo Clinic, Rochester. "*Protein Metabolism*," (A general survey of the importance of proteins in nutrition, the newer knowledge regarding amino acids, the improved methods of measuring amino acids in foods and biological materials, the possible amino acid imbalance, etc.), by Lavell Henderson, Ph.D. Department of Biochemistry, University of Wisconsin, Madison. "*Diagnosis and Treatment of Some Common Diseases of the Skin, with Particular Reference to the Mouth*," by Carl W. Laymon, Assistant Professor of Dermatology, University of Minnesota. "*Mineral Metabolism*", (research in human subjects more particularly as related to calcium metabolism), by Jane Leichsenring, Ph.D., Department of Nutrition, University of Minnesota. "*Some Fundamental Aspects of Iron Metabolism*", by Max O. Schultze, Ph.D., Department of Biochemistry, University of Minnesota. "*The Nature of Viruses and Virus Diseases*", by C. S. Stulberg, Ph.D. Department of Bacteriology, University of Minnesota. "*A Roentgenographic Technique which Strives for Anatomical Accuracy*", (a discussion of the technique, developed by Dr. Gordon M. Fitzgerald, Professor of Dental Roentgenology, University of California), by F. Raymond Garvey, D.D.S., of Saint Paul, Minnesota. "*Clinical Periodontia*", as related to group practice, specialization, and to the care of the average citizen, (Diagnosis, treatment planning, occlusion, instruments, surgical intervention, splints, postoperative treatment, root resection and recall plan), by M. H. Garvin, D.D.S., Winnipeg, Canada. "*Present Status of Chemotherapy*", by Dr. Elizabeth Cranston, Department of Pharmacology, University of Minnesota.

In a short editorial of course it is impossible to report fully on a seminar of this nature, however, one glance at the program nullifies the statement that dentists are only interested in the mechanical side of their work. More and more dentists are becoming interested in the biological aspect of dental practice and are returning to the colleges for postgraduate instruction in these fields.

One might mention, however, some of the findings presented at this Seminar in which every dentist is interested. Dr. Boynton pointed out that tonsilitis, for instance, is a self limiting disease; it runs its course no matter what you do and that the sulpha drugs have no effect. The report on common cold treatments by this same speaker proved very enlightening.

Extensive tests were carried out using adequate controls with the result that it appeared that with the Krueger* vaccine twenty five per cent of those treated were benefited, but that there was practically no benefit from heat-killed vaccines, influenza vaccines, oral vaccines and intranasal vaccines.

*The Krueger vaccine is a vaccine in which the organisms are destroyed mechanically instead of by heat. The vaccine used in this experiment was put out by Eli Lilly Company under the name of "Cold Vaccine U.B.A."

In all of these tests a marked improvement was noticeable but the improvement was no greater in the groups receiving treatment than in the control groups with the exception of the Krueger vaccine. Where beneficial results were reported from these remedies it is thought that the subjects so treated may have been more careful to keep out of draughts, getting feet wet, etc. It was impressive how wrong one can be without controls.

Since Americans smoke a billion cigarettes a day the action of nicotine upon the body functions assumes great importance. Dr. Roth pointed out that filters are useless and that one gets the same effect from injecting two milligrams of nicotine as in smoking two cigarettes, that there is a definite vasoconstriction from smoking, that blood pressure is elevated, that in vascular diseases it is most important to stop smoking, that this is true also of coronary disease, that coronary disease in women is much more common now than formerly, that gangrene of the feet is more common now with women than formerly, that the vasodilation produced by alcohol does not overcome the effect of smoking, in other words if one is going to smoke it would be wise to choose one's ancestors.

Dr. Henderson pointed out that there are twenty well known amino acids and that they are as necessary for bodily health as vitamins; that protein requirements are higher in old age, that there is often a protein deficiency in old age. He pointed out also that the metabolism of certain compounds through the body can now be traced by isotopes, radioactive carbons, etc., which will lead to much valuable information.

Dr. Laymon stated that 95% of leukoplakia is found at present in males and almost exclusively in smokers and that 15% to 20% of these cases become malignant. He has also seen the mucous membrane of the mouth hanging in shreds due to the use of penicillin lozenges. It was further stated that dermatitis due to nylon stockings was not in the nylon but in the dye and that there was much less danger when the darker shades were used.

Dr. Leichsenring stated that orange juice seems to favour calcium retention and that at no time is calcium retention influenced by increasing the phosphorus intake.

Dr. Stulberg pointed out that viruses are transferred by insect bite, abrasions of the skin, contaminated food and water, droplet infection, that entrance through the nasal passages is most important with exception of insect bites, that ultra-violet light will destroy the virus but the light must reach the virus, that killed virus vaccines are not much good and that it is useless to give sulpha drugs or penicillin to overcome viruses (except to prevent possible secondary bacterial involvement) so these drugs are not indicated in treating the common cold.

Dr. Cranston said that the local use of sulphonamides and penicillin are not as effective as was expected, that the local use produces a high sensitivity towards these drugs, and if using a sulpha drug locally one should use sulphanilimide. It was stated that one should never use the

sodium salt of the sulpha drugs in the mouth as they are too irritating but rather use the calcium salts. It was further pointed out that dry crystalline penicillin can be kept about three years but that solutions should be kept in the ice box and not used after one week; that 10% of patients will develop sensitivity to the drug from local use; better not use longer than five days and that if you have to use longer watch patient very carefully. Dr. Cranston urged the importance of isolating the organisms involved and test with the drug and then use doses of sufficient size to kill the organism, that drug resistance develops rapidly with all of these drugs, particularly streptomycin, that some organisms develop resistance to the point where they will not grow except in the presence of streptomycin.

All of these findings emphasize the fact that dentists have greater problems than restoring lost tooth structure or replacing lost teeth, that the status of dentistry as a true profession depends upon our knowledge of the biological problems confronting us daily in our practices.

M. H. G.

CORRESPONDENCE

Gottlieb and Dental Caries

TO THE EDITOR,—

In the Oct. and Nov. issues of the Journal there appeared two articles by Dr. Gottlieb entitled "Dental Caries and Related Subjects". One hesitates to comment upon these because of the great name which the author established for himself and the great service, which in the past, he has rendered to dentistry. That reputation has been further enhanced by the very able work of many of his former students who have carried on research to the benefit of dentistry.

In both of these articles there appeared many controversial statements which Dr. Gottlieb may be able to substantiate but until facts are presented, they remain controversial at best or in some cases, purely hypothetical. It is most stimulating to read literature containing an interesting hypothesis if it is presented as such but since no such foreword was given in these articles, I feel that these criticisms are in order:

(A)—No bibliography is given so that one is unable readily to check the accuracy of the statements regarding the work of other investigators. I am sure that as a scientist of much experience the author will agree that an accurate bibliography is a necessity.

(B)—Insufficient data is given so that it is difficult to reproduce the experimental conditions upon which the author must have based his conclusions and the proposed method of treatment for the arrest of caries.

(C)—No data is given either as to the number of cases or their age groups, the length of time that cases so treated had been under observation or whether the evaluation of the efficacy of the treatment was judged on the basis of digital and visual tests alone or in combination with radiographic studies. Not mentioned, and of equal importance, was whether the treatment and assessment of its effect was carried out by the same individual or group.

(D)—In view of the several different treatments proposed by the author in the course of the past few years it would seem that the long term efficacy of this latest technique has as yet to prove itself or else the author would hardly have been advocating so strongly the earlier methods when the results of this latest work were still to be assessed. Thus it is most difficult to accept statements such as the one appearing on page 470, paragraph 2, in which it is suggested (Quote) "compulsory impregnation of teeth of all school children..(will) raise the level

of our reputation, etc." I find it impossible to conceive of anything which would do more to harm the reputation of dentistry than to accept this statement and to act thereon until scientifically acceptable evidence is presented.

(E)—Forwarded under separate cover you have received annotated copies of these two articles in which attention is drawn to specific statements and which you will agree are too numerous to comment upon in this letter. But to raise but one other point at this time I would like to refer to an article by H. F. Atkinson, entitled "An Investigation into the Permeability of Human Enamel using Osmotic Methods" and which appears in the Nov. 1947 issue of *The British Dental Journal*. The experiment upon which he reports would seem to have been well planned and executed. Part of the experimental work dealt with the claims advanced by Gottlieb, Gordon and Shand of blockage of the "invasion roads". To quote in part from this article, page 211. "The enamel surface was treated with silver nitrate as described by Gottlieb—other materials such as chromium trioxide, zinc chloride, copper sulphate, etc., were tried." The con-

clusions reached by him after tests involving application of these chemicals for varying periods up to six hours were—"That the permeability of the enamel cap is not affected by the action of silver nitrate, etc., and thus whatever action silver nitrate may have in the prevention of dental caries this action is not due to the mechanical blockage of the invasion roads". In view of Atkinson's contradictory findings is not serious scientific doubt cast on the entire thesis of "mechanical blockage of invasion roads"?

Because of the high position of the author and the frequent references to his earlier work which appear in the general dental literature, statements such as those which appear in these two articles are accepted by many as "Gospel truth" and therein lies the danger. It is hoped that the author will either make it clear that he was merely advancing an interesting hypothesis unsupported as yet by acceptable scientific evidence or bring forth this evidence so that his latest work may be judged in its true light.

W. F. WOLFORD

1414 Drummond Street,
Montreal, Quebec.

NEWS FROM THE PROVINCES

BRITISH COLUMBIA

Dental Nurses Organize

The New Westminster dental nurses have formed a local organization with some 30 members. The officers elected are:—President, Miss Olive Trimbull; Vice-President, Miss Iris Roberts; Secretary, Miss Lois Winters; Treasurer, Miss Colena Cameron.

A banquet was held on April 2 when Dr. Emery Jones installed the officers.

ALBERTA

Calgary Dental Society

The March meeting of this Society took the form of an afternoon and evening clinic with intervening cocktails and dinner, on March 16, in the Renfrew Club.

The turnout was excellent, there being fifty-six members present.

In the afternoon Dr. F. L. Jacobson of New Westminster, presented a two and one half hour chair clinic on the use of local anaes-

thesia for cavity preparation, the application of a rubber dam and the preparation of a cavity and insertion of the amalgam restoration.

During most of Dr. Jacobson's afternoon presentation his able dental assistant carried on a table clinic for the purpose of answering questions regarding procedure, techniques and materials used.

Following dinner a short business meeting was held.

Dr. Jacobson's evening presentation was in the form of a paper accompanied by fine coloured slides.

The April 2 meeting of this Society was held in the Pallsir Hotel with fifty-three members present.

A full day was devoted to this meeting and our guest speaker was Dr. James Coupland of Ottawa. His presentation was as follows:—

- (1) Demonstration of Radiodontic Technique.
- (2) Oral Diagnosis.

(3) Radiodontic interpretation.

(4) The role of Radiography in Dentistry.

All of the above topics were illustrated with excellent lantern slides, and at any time Dr. Coupland welcomed questions.

There was a break between the afternoon and evening session during which a cocktail party, dinner and a short business meeting were held.

J. G. WALKER

Edmonton and District Dental Society

The afternoon and evening clinic on "Amalgams" presented by Dr. L. Jacobson and his assistant, Miss Trimble of New Westminster B.C. on March 15 was attended by 75 members of the Edmonton and District Dental Society.

Dr. Jacobson prepared and filled an M.O. cavity in an upper first molar and presented his clinic under the following steps:—

1. X-ray and diagnosis
2. Local anaesthesia
3. Rubber dam
4. Cavity preparation
5. Mixing, insertion and carving of alloy
6. Finish of restoration

Dr. Jacobson is an earnest and inspiring speaker and gave an outstanding and worthwhile clinic.

Dr. H. R. MacLean thanked Dr. Jacobson on behalf of the Society for his splendid presentation and also for the address given to the dental students at the University.

At the dinner Dr. Andy Deegan entertained with several selections on the Euphonium accompanied on the piano by his son Roger.

A short business meeting followed the dinner at which Dr. Kendal, the President announced that on April 26, there would be an "All Day Clinic" by Dr. James Coupland of Ottawa. He also thanked Dr. Ross Stuart, the Secretary, and Dr. Harold Knight, the social convener for the efforts in making the clinic a success.

G. F. B.

Lethbridge Convention

Dentists of Lethbridge met with the district dentists at a one day Convention held March 17 at the Marquis Hotel. Dr. Jacobson of New Westminster presented a most interesting clinic on "Fine Amalgam Restorations." The program was as follows: 10 to 12 A.M.,

Chair Clinic. Noon Luncheon. 2 to 5 P.M., Table Clinic and Question Period.

Twenty dentists attended and fifteen dental nurses. District points represented were Blairmore, Coleman, Pincher Creek, Claresholm, Taber and Cardston. D. A. RYLANDS

Dentistry and Pharmacy

Early in March Dr. J. W. Neilson of the Faculty of Dentistry, University of Alberta, presented a paper on "The Interrelationship of Dentistry and Pharmacy" at a meeting sponsored by the School of Pharmacy of the University and the Edmonton Retail Druggists' Association.

Dr. Neilson outlined the efforts made by the dental associations to safeguard the public from injurious dental preparations and urged greater co-operation between the health professions.—*Edmonton Journal*.

MANITOBA

Winnipeg Dental Nurses' and Assistants' Association

The guest speaker at the April 12 meeting of this Association was Dr. Gordon Campbell, Director of Dental Services with the Manitoba Government. He gave an enlightening talk on the part played by Dentistry in the Public Health Scheme.

Reports given on the Dance, held April 9, in aid of the Children's Hospital Fund, were most favourable.

D. McCULLOCH

Winnipeg Dental Society

This Society wound up its 1947-48 season with about 70 members in attendance at a dinner and business meeting on April 12, Dr. S. S. McLeod, the president for the season presiding.

The guest speaker for this occasion was Dr. W. F. Mackenzie of Winnipeg. His subject was Endodontia. Dr. Mackenzie's description of the technique he uses for root canal therapy seemed to be fool proof with asepsis as the objective and the slides he exhibited to prove the results he obtains from the method he employs should encourage others to do likewise.

The financial statement for the year showed an income of about \$1,400.00 from membership dues. About 140 members out of a

possible 190 residing in Winnipeg is an unusually high ratio and possibly a record for any city in Canada.

The Officers for the 1948-49 season, are as follows: President, Dr. Ivan Jackson; Vice-President, Dr. Bert Oja; Secretary-Treas., Dr. J. B. Rumberg; Executive members, Dr. Orville Brown and Dr. Ernie Wallace.

ONTARIO

HAROLD KEITH BOX, D.D.S., Ph.D.

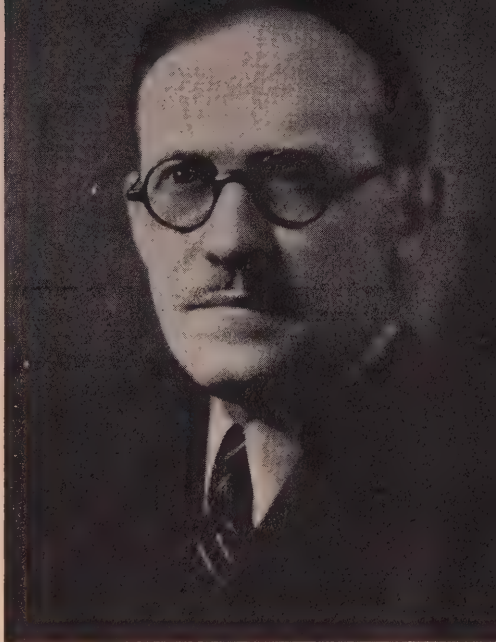
Awarded 1948 Jarvie Medal

This coveted Fellowship Gold Medal is awarded annually by the Dental Society of the State of New York. It was presented to Dr. Box at its eightieth annual meeting at Syracuse, N.Y., on May 10. This is the second time that a Canadian dentist has been so honoured since the inception of the award in 1905. The late Albert E. Webster, LL.D., D.D.S., M.D., won the medal in 1932 for his contribution in the field of root therapy and was the first Canadian to win the distinction.

The award is made to the individual who has contributed outstandingly to original research or whose high attainment and professional career has been of such a character as to have materially advanced the science and art of dentistry.

Dr. Box is at present Research Professor of Periodontology in the Faculty of Dentistry, University of Toronto. He joined the staff of the College of Dentistry of the Royal College of Dental Surgeons in 1914 as a demonstrator in bacteriology. In 1920 he was promoted to Professor of Dental Pathology and Periodontology and in 1927 received his present appointment. In the period from 1920 to 1948 Dr. Box has written 46 papers for dental journals and has contributed 12 bulletins and 2 monographs.

The work and progress of the Department of Periodontology in the Faculty of Dentistry, Toronto, has achieved wide recognition under the leadership of Dr. Box. In a recent graduate course conducted during the week of May 3 dentists were registered from the states of Texas, Ohio, Indiana, Nebraska, Louisiana as well as several Canadian Provinces. Recent visitors to the department include Dean Alphonso Leng of the University of Santiago, Chili; Dr. Emil Schulz of Prague, Czechoslovakia; Professor J. J. Holst, Professor of Dentistry, Copenhagen, Denmark; Dr. J. Axel



HAROLD KEITH BOX, D.D.S., Ph.D.

Hojer, Surgeon-General, Government of Sweden; Dr. Valy Menkin, Associate Professor of Experimental Pathology, Temple University, Philadelphia; Dr. Frank Beube acting head of the Department of Periodontology, Columbia University.

It seems amply evident that Dr. Box enjoys the admiration and esteem of his colleagues in the specialty of Periodontia. In receiving this award he not only brings honour to himself and the Faculty of Dentistry, University of Toronto, but also to Canadian Dentistry.

Dental Alumni Dinner, University of Toronto

With an attendance of 100 the second annual dinner of the Alumni was held at the Arts and Letters Club, Toronto on April 8. President Dr. E. A. Grant presided and after paying tribute to Dr. John Bothwell for reviving the organization he suggested it had a real value in keeping a professional contact and helping to stimulate interest in the University, particularly our own Faculty to which we look for information and knowledge to keep us abreast of the times. Dr. W. Breslin reported an active membership of 437 with 75 new members this year. Dr. Jess Fullerton reported a project promoted by the Alumni

Executive to produce a motion picture film and a booklet in the interest of vocational guidance for prospective collegiate students anticipating dentistry as a career.

Dr. W. J. Deadman of Hamilton, guest speaker of the evening was very ably introduced by Dr. W. J. Langmaid of Oshawa. Dr. Deadman chose as his theme, "The History of Medicine" up to the end of the 17th century. The address was most suitable for the occasion; it was thoughtful, educational and given in a most interesting fashion.

The speaker pointed out there was no progress in the 1000 years from 400 to 1452 because there was no freedom of thought. The ordinary citizen under feudalism was ruled by the lord of the manor. In medicine Hippocrates and his Roman successor Galen decreed the principles of medical practice. However during the 15th and 16th century a change in outlook began to appear with a rising tide of criticism, doubt and inquiry which ushered in an era of progress in the 17th century. The period began with the Divine Right of Kings—"L'état s'est moi" said Louis the Great of France and got away with it but not so Charles I in England; a new spirit of independence was abroad and people were doubting and questioning. So in medicine, this new development of free thinking touched an enthusiasm for investigation and research. Italian Schools of Medicine began doing dissection in the study of anatomy; William Harvey in England presented a thesis on the circulation of the blood; the first microscopes appeared, and the function of the lungs in respiration was discovered. Even King Charles recognized the progress of Medical Science and in 1762 granted a charter to the Royal Society of Medicine.

Peculiarly Medical practice did not make much progress in using the newer knowledge of science. It was an age of superstition and medical treatment when viewed in the light of today was very fantastic, however towards the end of the century Thomas Sydenham initiated a trend of thinking centred about "The healing power of nature"—"give nature a chance", said he. From this point co-relation of practice and scientific knowledge began to take form.

In conclusion the speaker contrasted the slow acceptance of new theories and scientific discoveries in medical practice in the 17th

century with modern trends when new things are often accepted too quickly.

Toronto Ladies' Auxiliary

Mrs. M. G. Boyes, the retiring President of the Ladies' Auxiliary to the Academy of Dentistry was presented with a Royal Doulton figurine at an executive tea held recently at Prince Arthur House. In making the presentation Mrs. A. F. Cooper stressed the diligence with which Mrs. Boyes had carried out the duties of the office and extended congratulations on the successful completion of the Auxiliary's project for the year which was the financing and equipping of a dental clinic for the Children's Aid Society.

D. E. PATERSON

Varsity Appeals for Six Million Dollars

The University of Toronto drive is under way for thirteen million dollars to provide better facilities to fulfill its function as a great Canadian University. Already the Ontario government has made seven million of this available and the campaign is now on to raise the remaining six million dollars from its 44,000 graduates in Canada and United States.

This is the first time in 121 years that any effort has been made to raise funds in this way. However money gifts have been made from time to time by private individuals and since the end of the last Great War an amount over 12 million has been donated.

An attempt is being made to contact every graduate of the University soliciting an expression of their interest in their Alma Mater by a money gift.

On April 27 a group of about 80 dentists met for dinner at Hart House to hear the details of the appeal. A number of speakers contributed to the discussion including Chancellor Vincent Massey, Mr. Morley Sparling, Dean Roy Ellis, and Mr. John Fisher of radio fame. The latter gave an inspiring address "Seeing Varsity through the eyes of an Outsider." (Mr. Fisher is a graduate of Dalhousie University). The speaker made his hearers very proud of their University.

Dean Ellis emphasized the great need for additional facilities in the dental faculty for research, and for graduate and undergraduate studies. He indicated the problems of maintaining high standards in training students

with inadequate equipment and space. In reference to graduate courses he pointed out the almost impossible task involved in their successful promotion when suitable accommodation is not available. Continuing he said it was a unique occasion that dental graduates should be asked to assist in this project of raising funds for the University when confronted by so many pressing problems right on their own door steps. By inference one concludes that dental graduates because of their own need understand all the better the necessity of a University building program in which Mr. Massey stated "Dentistry would not be forgotten."

Dean Ellis urged a sympathetic and broad-minded consideration of the appeal backed up by a faith that every department of the University will share in this great progressive movement.

Dentistry as a Faculty of the University of Toronto shares in its prestige and dental graduates wherever located will achieve tremendous personal satisfaction in having a part in an undertaking to make a great University greater still—especially when it is their Alma Mater.

Peterborough and District Dental Society

Dean Roy G. Ellis of the University of Toronto was the speaker at the annual meeting of this Society.

The following officers were elected:—

<i>President</i>	Dr. M. G. McCartney
<i>Vice-Pres.</i>	Dr. E. C. McKee
<i>Sec.-Treas.</i>	Dr. A. H. Hall
<i>Executive Committee</i>	Dr. J. J. Craig; Dr. R. C. Honey

Hamilton Dental Association

The closing meeting of this Society was held on April 6 and took the form of a social evening which included dinner and entertainment. Dr. Dwight Coons gave a review of the activities of the National Research Council, Dental Division.

New officers elected:

<i>President</i>	Dr. J. G. Countryman
<i>Vice-President</i>	Dr. E. G. Dore
<i>Secretary</i>	Dr. H. C. Thompson
<i>Treasurer</i>	Dr. J. V. O'Shaughnessy
<i>Directors</i>	Dr. W. G. Foster Dr. W. W. Baxter
<i>Chairman of Program</i>	Dr. G. W. Spinks

Cornwall and District Dental Association

The organization of this new society was held in Cornwall. Dr. M. O. Good is the first President with Dr. W. M. Stevenson of Avonmore as Vice-President and Dr. W. C. Sullivan of Cornwall as Secy.-Treasurer.

Sixteen dentists attended the meeting and drafted a constitution. It was decided that all practising dentists in the united counties shall be members.

NOVA SCOTIA

Halifax Dental Nurses' and Assistants' Association

This Association held its April meeting in the Y.W.C.A. with the President Avis Ritcey, in the chair.

Dr. G. A. Chudleigh was guest speaker and in a highly interesting and informative address discussed early dentistry in the American colonies. Pictures on the California Mission and Peggy's Cove were shown by Roy Isnor and were thoroughly enjoyed by all.

Dalhousie Dental Students' Society

Executive:—

<i>President</i>	Jim M. Darcy '48
<i>Vice-President</i>	Carl E. Dexter '49
<i>Secretary</i>	Kathleen M. Stack '50
<i>Treasurer</i>	Gordon Colwell '51

On March 15 the Dental Students' Society of Dalhousie University held its Annual Banquet in honour of the graduating class, at the Lord Nelson Hotel, with the Vice-President, Mr. Carl Dexter, in the chair. The banquet was well attended with a good representation from the Halifax Dental Society. Guests of the evening were Dr. A. E. Kerr, President of Dalhousie University and Dr. G. M. Logan, Dental Director, Camp Hill Hospital.

During the dinner, the guests were entertained by a beautiful rendition of song by Miss Kay Stack, accompanied by Dave Peters '50.

Program of Toasts:—

TO ALMA MATER—proposed by Dr. W. C. Oxner, responded to by Dr. A. E. Kerr.
TO THE GRADUATES—proposed by Eric Whyte '49, responded to by Donald Steeves '48.
TO THE LADIES—Proposed by Pete MacCarren '51, responded to by Dr. J. W. Dobson.
Dean J. S. Bagnall introduced the guest speaker, Dr. G. M. Logan, who explained the

present day views on what is termed State Dentistry, a timely subject for the graduating student as well as the practitioner.

A vote of thanks was proposed by Brendon MacNeil '48.

In closing, appreciation was shown to Jim Darcy for his untiring work and extra curricular achievements while at Dalhousie.

The dinner committee consisted of Philip Simon '49, Ken Kerr '50, Joe MacDonald '50.

Sydney Dental Society

At the April Meeting of this Society, Dr. R. R. Dalglish spoke on "Some Phases of Preventive Dentistry".

QUEBEC

Montreal Dental Club

Activities within the Club have increased with the setting up in February of a number of study groups, under the general chairmanship of Dr. M. A. Rogers. These groups cover the subjects of Radiology, Surgery, Endodontia, Crown and Bridge and Operative Dentistry, and will operate under the chair-

manships of Drs. R. E. McMahon, J. W. Gerrie, A. D. Richardson, Owen Fredericks and J. W. Morton respectively.

At the February meeting of the Club Dr. J. K. Carver, President of the C.D.A. gave advance details of the convention program of that body to be held at Murray Bay in June. Dr. Carver also reported to the Club some of the recent activities of the Provincial Board with regard to new Legislation it was seeking.

The March meeting was addressed by one of its own members, Dr. I. K. Lowry who spoke on the subject "Objectives in Full Denture Construction and Suggested Means of Attainment". This talk dealt with the interrelationship of various factors in full denture construction and a step by step consideration of each factor was given, illustrated by slides. This presentation which was given last June at the C.D.A. national convention at Digby and more recently before the Maine Dental Society was much appreciated by the large turn-out of members present. The Club takes pride in the fact that Dr. Lowry has been invited to appear before the American Dental Society of Great Britain at its meeting in London in July.

EMPIRE NEWS

GREAT BRITAIN

Letter to the Editor of the Glasgow Herald, published Feb. 27, 1948

Health Service

Sir,—I desire to congratulate you on your masterly leading article on the Health Services. As you state, for some time to come these will, in the balance, be inferior to those at present in operation.

In view of widespread misconceptions concerning the dental services, which are planned to come into force for everyone on July 5, a few points are worthy of consideration.

The services are merely a continuation and extension of National Health Insurance dentistry.

From the compulsory weekly contributions payable under the National Health Service Act about 3d weekly is allocated to dental treatment.

Only treatment such as polishing, fillings, denture repairs, extractions not necessitating

replacement by dentures can be undertaken without the sanction of the Estimates Board (a State-appointed body).

More extensive treatment—e.g., the provision of dentures—is possible only if sanctioned by the Estimates Board, who are further empowered to arrange for the examination of any patient.

In the London County Council a ban at present exists on all medical and dental officials in their service discussing professional affairs in general. It is not improbable that this might be extended to include all dentists engaged under the National Health Service Act.

Today there exist two standards of dental service—one (utility) for insured persons and the other for private fee-paying patients. The meagre 3d weekly allocated under the new scheme will certainly not succeed in bridging that gulf.

I am, etc.

J. MENZIES CAMPBELL

SOUTH AFRICA

Extraction of Teeth by Medical Practitioners

The South African Medical and Dental Council has resolved to recommend that the Medical, Dental and Pharmacy Act, No. 13 of 1928, be amended by the deletion in Section 35, sub-section 3 of the words "Nothing in this section contained shall be construed as prohibiting a medical practitioner not registered also as a dentist, from performing in the course of his practice acts pertaining to the practice of dentistry other than prosthetic dentistry", and the substitution therefore of the words "A Medical Practitioner shall not perform any act pertaining to the practice of dentistry except in the case of emergency, and where there is no dentist reasonably available."

The Council has resolved to recommend to the Honourable the Minister that the under-noted rules be added to the rules regarding conduct of which the Council may take cognizance.

- (a) The performance by medical practitioners and dentists, except in emergency, of professional acts for the performance of which they are inadequately trained and/or insufficiently experienced.
- (b) The performance under improper conditions and surroundings of professional acts, except in emergency.

South Africa National Health Service

Statements made by the Minister of Health, especially those contained in his address to the first post-war Congress of the Medical Association of South Africa in 1946, make it quite clear that National Health Services foreshadow the eventual abolition of general private medical and dental practice. In other words, it is intended that all medical and dental practitioners shall become Governmental employees under Public Service Commission conditions.

To the abolition of private practice the whole dental profession is opposed. On the other hand it is generally conceded that a large number of practitioners must take part in the proposed National Health Services either in a full-time or part-time capacity. The questions of control of National Dental Health Services and the employment of such dental officers in these services have given rise to much discussion.

The healing professions are and must always be public servants. There seems no good reason why, in fulfilling their obligations, they, or even a section of them, should become Governmental employees, *i.e.*, civil servants.

Once the dental service is a "civil service" the profession as such will have no say in the type of service to be rendered and will be powerless to protect either the public or the profession.—*Jour. D. Assoc. of S. Africa.*

GENERAL NEWS

PRESIDENT OF A.D.A. AT SEATTLE

by Maude Spence Holway, D.D.S.,
Seattle, Washington

"We must care for the children to prevent dental crippling of adults" declared Dr. H. B. Washburn, of St. Paul, Minn., President of the American Dental Association, in an address delivered at the annual Mid-Winter Dental Clinic held in Seattle, Washington.

Dr. Fred S. Shandley, trustee of the A.D.A. introduced Dr. Washburn saying "Dr. Washburn is a man who is master of his own convictions and master of his own speech".

The President's subject was "American Dental Association". He outlined the history, growth, structure, functions, and activities of the A.D.A.

The National Organization was founded eighty-seven years ago, in Niagara Falls, N.Y., by a group of twenty dentists. It has grown to a membership of seventy thousand. The A.D.A. has one hundred full time professional employees and operates on a budget of between seven hundred thousand and one million dollars yearly.

Some of the component parts are, legislative, health, economic, therapeutic, and research councils. Important in the many activities are The Journal, and this year the new Directory of Dentists.

"The A.D.A. is an integral part of the American health scene" stated Dr. Washburn. "The A.D.A. should establish a pattern that may be used by local societies if they so desire."

Dr. Washburn concluded with suggestions to the membership to "get your thinking on dental affairs across to your delegates. Real ideas come from you as members and it is your responsibility to let your delegates know your ideas. Seventy thousand dentists working together should be able to solve the problems of legislation and dental health of all the people."

The president stated that this was his first official visit to the Pacific Northwest and said "I regret not being able to attend the Vancouver Dental Meeting but I am happy to have met so many Canadian dentists here."

Dr. L. O. Halgren, Secretary of the Pacific Coast Dental Conference was introduced. He extended an invitation to the Conference to be held in Salt Lake City in July and urged that Canadian dentists attend.

"I came here primarily to find out what you would like at our Conference" explained Dr. Halgren.

The Mid-Winter Clinic was attended by one thousand dentists. Giving clinics were prominent Canadian dentists. Dr. Cal Foote, President of the Vancouver Gold Foil Club cliniced on gold foil, and Dr. Clay Hollman of Vancouver on denture service.

There were forty-two Canadian dentists registered. Dr. G. A. C. Wally, President-elect of the British Columbia Association was there. Dr. Bob Scharff, Dr. Lloyd Jacobson, Dr. Munro, Dr. Dick McDougall, Dr. Bill Millburn, Dr. Jack Mercer, all were enjoying the lectures and clinics.

It is through the skilled demonstrations and collective thinking of such a group of dentists that progress is made in the profession, and in the words of Dr. Washburn such meetings "lead to more and better service to more people."

Doctor Warns Against Indiscriminate Use of Vitamin Pills

No one should attempt to diagnose and treat his own troubles by taking vitamin pills—such pills should be used only when prescribed by a doctor. Such is the advice given by Dr. E. H. Bensley in an article—"The Truth About Vitamin Pills"—in a recent issue of *HEALTH*, official magazine of the Health League of Canada. Dr. Bensley is Director of the Department of Metabolism and Toxicology at the Montreal General Hospital.

"In view of the widespread indiscriminate use of vitamin pills, it is fortunate that there has been no evidence to date that harmful effects are produced by vitamins in the doses ordinarily taken," Dr. Bensley writes. "It is true that vitamins can act as poisons if they are taken in amounts far in excess of those recommended for either the prevention or correction of deficiency diseases." He says this has occurred sufficiently often in the case of one vitamin, (D) "to be worthy of note."

He adds that although harm may not be caused directly by the indiscriminate use of vitamin pills, this practice, like all forms of self medication, may be indirectly harmful in that it gives the individual a false sense of security and leads to delay in seeking medical advice.

Dr. Bensley says that there is no evidence that health is improved by giving extra vitamins to a person who is not suffering from a specific vitamin deficiency disease. Vitamin pills alone cannot correct dietary deficiencies. Pills may help but chief reliance must be placed on a balanced diet.

He adds, however, that condemnation of vitamin pills as being of little or no value would be absurd. Vitamin pills or similar forms of concentrated preparations of vitamins, he states, are of value under two sets of circumstances. They may be used—but only when prescribed by a physician—first to prevent the development of diseases due to deficiency of vitamins in the diet, and second, to treat diseases due to vitamin deficiencies.

Threat of New National Emergency Speeds Study of Military and Civilian Health Needs in U.S.A.

The role of the nation's health services in the event of a new war or national emergency is being studied feverishly in the nation's capitol. The possibility of a shortage of dentists and physicians in the armed forces is reflected in the new selective service law being considered by Congress. Dentists, physicians, and veterinarians up to 45 years of age are made subject to immediate call. In all other personnel categories, the proposed selective service act lists only those males between 19 and 26 as subject to immediate call.

The Office of Civilian Components is gathering statistics on the number and distribution of professional personnel. The Army Surgeon

General's office is engaged in an overall study of the maintenance of health service during war time. Information is being sought on the most feasible means of supplying sufficient dentists to care for an expanded armed forces and at the same time provide a minimum degree of dental care for the civilian population. In many quarters, officials are looking back with regret on the short-sighted policies during World War II which refused deferment to dental students. Dental graduating classes this year and next year will be among the smallest in a quarter of a century despite the nation's greatly expanded population and its increased demands for dental care.

Temple University, Philadelphia, Confers D.Sc., on Mr. A. E. Rowlett, L.D.S., R.C.S., Eng.

Canadian dentists join in congratulations with their English colleagues at this new recognition of a highly regarded confrère. Dr. Rowlett came to America to receive the Honorary degree of D.Sc. from Temple University and to give the address on the occasion of the opening the new Dental Pharmacy School of the University. Dr. Rowlett is a very modest man, yet possessing comprehensive knowledge of world dental affairs. He is often referred to as an ambassador of good will in the dental world. While in America he gave the Memorial lecture in Meharry Medical College, Vanderbilt University, Nashville, Tennessee.

Dr. Rowlett was in Toronto on April 30 and plans a visit to Montreal and other places. He is taking advantage of the opportunity while on this continent to discuss dental conditions in Europe and exchange information relative to dental health service.

Partition in India

The half-yearly report of the Honorary Secretary of the All India Dental Association gives a distressing account of the plight of a large number of the members of the Association who abandoned their practices in Pakistan and all their equipment and made their way to Delhi. At first it was impossible to find accommodation for all of the refugee dentists but thanks to their own initiative and the help they have received from their colleagues the greater part of them are now gradually settling down in practice again "to start life," as Mr. Berry put it, "from scratch."

Imports from U.S.A.

At Canadian request, U.S. postmasters are under orders to refuse all merchandise shipments to Canada (except "unsolicited gifts" not containing advertising matter or tobacco and not exceeding \$5 in value) unless the sender can endorse the package "Importation into Canada authorized."—*Dental Survey*.

Legislative Committee Opposes Bill to Give Dental Care to all Dependents of Navy Personnel

The American Dental Association Legislative Committee has announced its disapproval of a bill pending in the House of Representatives which would provide dental treatment for dependents of Naval and Marine Corps personnel. Dr. Carl O. Flagstad, A.D.A. legislative chairman, declared that the allotted dental personnel would have to be increased to provide the additional services. He said: "The recruiting of dental officers is very difficult at the present time. There is little hope of bringing the corps up to full strength until we catch up on graduates from dental schools. During the last year of the war prospective dental students were not deferred and consequently our present graduating classes are small."—*Jour. A.D.A.*

Movie Demonstrates Topical Fluoride Applications

A new 16 mm. colour film which shows the technique of application of a solution of sodium fluoride to the teeth of children has been produced by the United States Public Health Service. The film, entitled "Topical Fluorides," runs about 9 minutes.

Dr. Polly Ayers Adopts a Novel Educational Device

The Birmingham Alabama Post recently reported, "Before long when a youngster in Jefferson County becomes three years old, the postman will deliver a very special birthday card to his or her door. It will bear greeting from the Jefferson County Department of Health. Most important, it will remind the child's parents that it's time for the youngster's first visit to the dentist."

Dr. Polly Ayers is Director of the Bureau of Dental Health, Jefferson County, Department of Health in Alabama.—*New York Journal of Dentistry*.

Life Membership may Exceed 11,000 by 1960

The American Dental Association may have 11,000 or more non-dues paying life members by 1960, it is forecast in a report by Dr. Shailer Peterson, director of educational measurements.

Under present regulations, dentists who have been members of the Association for 25 years and are 65 years of age or older are eligible for election as life members by the House of Delegates.

At present, the Association has 1,769, life members, including 937 elected at the annual session at Boston.

Norway Plans Cheaper and Better Dental Care

by ELIZABETH KITSON

Condensed from Toronto Star Weekly

"The high cost of dentistry", a bogey for those who cannot afford it and so do without it, has received a body blow in a report presented by a special committee of Norwegian dentists and doctors. The national dental service, which the report recommends for Norway, calls for free dental treatment for all children between 7 and 18 years and, what is even more radical, reduced rates for adults so that the vast majority will be able to afford dental treatment. The committee proposes that the plan be put into operation July 1, 1950, with a transition period of 15 years.

It is entirely independent of the present national health insurance, the cost of school children's treatment being borne by the local councils and the state, and reduced dental rates for adults to come under control of the state.

The question of personnel has caused the committee most headaches. As a result of the five years of occupation, there is a serious shortage of dentists in Norway and under present conditions, the majority of those qualifying as dentists today prefer to work in the towns. The latest figures as at July 1, 1946, showed there were 1,593 dentists in Norway. Of these, 1,095 are in the towns and 498 in the country districts. This means that while 72 per cent of the population live in the country districts, they are served by only 31 per cent of the dentists.

In order to meet the estimated need of 1,075 new dentists during the next 10 years, if the plan is to succeed, it is proposed to double

the number of students at the Norwegian dental high school and, possibly, provisional four-year courses—instead of the usual six years—will be introduced to tide over the first years.

Under the present system, whereby school children between 7 and 14 receive free treatment, the number of such children has reached 230,000, out of a possible 298,000, or nearly 80 per cent.

In the case of children and young persons, extension of the age limit to 18, under the new plan, will increase the number obtaining free benefit from 230,000 to nearly 540,000.

The cost of the new scheme, estimated at about \$2,120,000 annually, would be divided, with \$840,000 paid by the state, \$560,000 by the county authorities and \$720,000 by the municipalities. This compares with a public expenditure of \$660,000 on the present system of free dental care for school children between 7 and 14.

Synchro-Cyclotron

Carnegie Institute of Technology has announced that its new synchro-cyclotron will be located on the former site of the KDKA transmitting station, operated by the Westinghouse Electric Corporation, at Saxonburg, Pennsylvania, 28 miles northeast of Pittsburgh. The present facilities will be enlarged to include an L-shaped building containing 20,000 square feet of floor space to house a laboratory, cyclotron controls, and a synchro-cyclotron expected to produce 350,000,000 electron volts. It is estimated that the total cost of the project will be near \$1,000,000 and that the cyclotron should be in operation early in 1950—*Science*.

Teeth of the Che Wong

C. F. Mummery, Chief Dental Officer of the Malayan Union reports in the British Dental Journal of February 20, 1948 on the dental health condition of the above primitive people living in inaccessible hills in Pahang. He states that the Che Wong are a primitive tribe living as they have always lived for thousands of years, and that they are as remote from civilization as it is possible to be these days. Their diet is one which is advocated in current literature as productive of dental health and yet he found our old enemies caries, inflamed gums and the impacted third molar.

Administration of Veterans Affairs in U.S.A.

Specific complaints against the present V.A. dental service program listed by the Council on Dental Health of the American Dental Association included charges that:

1. Impractical administrative policies currently being followed have resulted in much lost time for veterans and dentists.

2. Long delays in authorizing treatment have resulted in serious damage to the dental health of veterans in many cases.

3. The V.A. dental examination form is unnecessarily complicated.

4. Participating dentists frequently are not permitted to make the examination and diagnosis of the veterans dental condition they will be expected to treat.

5. The present trend to refer veterans to V.A. clinics for treatment deprives them of free choice of dentists and is in conflict with original agreements by V.A. officials.

6. Payments to dentists for services rendered, in a large proportion of cases, have

never been made or have been delayed for a period of six months to a year.

Pointing out that the difficulties encountered in the V.A. program are only partially the result of shortage of funds, the Council declared:

The basic faults are directly attributable to the unsound, and unrealistic regulations and administrative procedures. To correct these difficulties will require a complete overhauling of the basic plan for providing out-patient dental treatment for veterans.

Protein Museum

A new and unique kind of museum for the collection, preservation, and study of the proteins of the blood and other tissues of the bodies of organisms has been established at Rutgers University. This museum is dedicated to the proposition that the proteins of the bodies of organisms are as characteristic as are any of their other constituents and as worthy of preservation and comparison as their skins and skeletons.

IN MEMORIAM

Gordon James Millen, M.M.P., of Toronto, Ontario died on April 16 at his home at the age of 49.

Dr. Millen was graduated from the College of Dentistry of the R.C.D.S. in 1921 and immediately began to practice his profession in his native city until his death.

He was a public figure in Municipal affairs for many years, serving first on the Board of Education then as Alderman from 1938 until he was elected to the Provincial legislature in 1945 to represent Riverdale Riding, Toronto.

In the first Great War he served with the Canadian Army Dental Corps during 1917-18. He was a director of the East Toronto General Hospital. He was a member of Rameses Shrine, Queen City Lodge A.F. & A.M.; also a member of I.O.O.F., Riverdale Orange Lodge, Native Sons, Riverdale Kiwanis and St. Albans Anglican Church.

He is survived by his widow, one daughter June and two sons, Dr. John E. and Norman R. Millen.

Samuel B. Gray, of Toronto, Ontario, aged 76, died April 2. He was a graduate of the University of Toronto. After practising for 10 years in Stratford he moved to Toronto where he continued to practise until his retirement in 1941. He was a former member of Oakwood Curling Club, and a member of the Masonic Order and Deer Park United Church.

Dr. Gray is survived by his widow, three sons, a daughter, a sister and one brother.

Charles Henry Juvet, of Ottawa, Canada died on April 15 at the age of 73.

Dr. Juvet graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1903. He was a well known figure in the Capital City where he practised up until a few years ago when he retired.

He was a member of the Anglican Church. He is survived by his widow, one daughter and one son.

IN MEMORIAM



DR. JOSEPH NOLIN

Joseph Nolin, of Montreal, Quebec, aged 84, died March 11. He was one of French Canada's distinguished dentists.

He was graduated from the Philadelphia Dental College. In 1903 together with Dr. Eudore Dubeau and Dr. J. G. A. Gendreau he founded the Laval Dental School, now the Faculty of Dentistry, Université de Montréal, and devoted many years to teaching and developing the science of dentistry. He was Vice-Dean of this Faculty when he retired a few years ago.

Dr. Nolin was an ex-president of the Canadian Dental Association and also served for many years on the Board of Governors of the College of Dental Surgeons of the Province of Quebec.

Last year, in recognition of a half century of outstanding science the Université de Montréal founded the Nolin prize to be awarded annually to the student most proficient in Dental Surgery. Prior to this Dr. Nolin had been given an honorary doctor's degree by the University, a reward for his contribution to the development of the Faculty of Dentistry.

Walter Gordon Manning, of Hamilton, Ontario died on April 21. Dr. Manning, a native of Peel County was graduated from the Royal College of Dental Surgeons of Ontario in 1913. He began to practice in Hamilton where he continued until his death. He was a member of the Hamilton Health Department staff.

He is survived by his widow.

Robert Blgrave Bell of Montreal, Quebec, died suddenly on March 21, in his 45th year. He was graduated from McGill University in 1928 with the degrees B.Sc. and D.D.S. "Bobby" Bell was always active in sports in undergraduate days and later coached inter-collegiate championship hockey teams of his university, winning many honours.

He was a sports enthusiast - captain of squash at the Montreal Badminton and Squash Club; member of the Mount Royal Tennis Club; 1947 Chairman of the Canadian Davis Cup Committee; director of Knowlton Golf Club; Past President of Brome Lake Boating Club and an active member of the McGill Memorial Gymnasium Campaign Committee.

He was a member of the Board of Stewards of Dominion Douglas United Church and a director of the Montreal Sailors Institute, giving much of his time to church and philanthropic work.

He was always active in his profession; was lecturer at McGill in dental anatomy and in office procedure and business management; President of the Montreal Dental Club in 1947, presided over the 23rd annual fall clinic of that body last fall and at the time of his death was Honorary President of the club.

Dr. Bell is survived by his widow, two sons, his mother, and a sister.

George H. Kennedy, of London, Ontario, aged 73, died March 31. He practised dentistry in London for 45 years until his retirement about three years ago.

He was an adherent of First-St. Andrew's United Church.

Dr. Kennedy is survived by two daughters.

Valeur de la vitamine B¹ dans le traitement des névralgies du trijumeau

par GERARD TARDIE, B.A., D.D.S., Québec

LE traitement des névralgies du trijumeau et des tics douloureux de la face pose des problèmes intéressants pour le dentiste. Malgré les données récemment acquises et solidement établies, c'est une question qui reste constamment à l'ordre du jour et elle est d'autant plus d'actualité que des résultats très prometteurs ont été obtenus par l'emploi d'injections de vitamine B¹.

Pour bien situer le sujet de ce travail, nous ferons une brève description de cette maladie.

La névralgie du nerf trijumeau atteint rarement les trois branches du nerf à la fois; la branche ophtalmique est plus souvent en cause que les branches maxillaire supérieur et maxillaire inférieur. Dans quelques cas, la névralgie se limite à un seul filet nerveux, au nerf dentaire, au nerf lingual.

La névralgie se traduit: 1—par des douleurs continues. 2—par des douleurs paroxystiques, qui reviennent sous forme d'accès. Les douleurs continues n'ont aucune acuité: c'est une sorte d'endolorissement de la région envahie. Souvent même, un patient n'ayant aucune dent dans la bouche se plaindra du mal de dent. Les douleurs paroxystiques constituent les accès;

l'accès éclate sans cause appréciable, sous l'influence d'une excitation insignifiante. Ce peut être le fait de manger, de se raser, se laver la figure ou même un courant d'air. Le sujet alors, éprouve une série de secousses douloureuses qui augmentent d'intensité jusqu'à l'apogée de l'accès, qui peut durer un quart d'heure ou plus longtemps encore, si la névralgie est d'ancienne date.

Chez certains individus, la névralgie du trijumeau revêt des caractères particuliers: le sujet est pris tout à coup d'une horrible douleur; il gémit et pousse des cris de souffrance, il presse son visage entre ses mains, il le frictionne violemment, espérant ainsi atténuer la douleur, et après quelques secondes, une minute au plus, l'accès est terminé. Le plus souvent, au moment de l'accès, les muscles du visage, principalement du côté de la névralgie, sont agités de mouvements convulsifs, rapides, qui donnent à la physionomie les attitudes grimaçantes les plus diverses, ce qui a fait donner à la maladie le nom de tic douloureux de la face.

Tous les auteurs anciens et modernes ont préconisé tout d'abord le traitement médical, puis le traitement chirurgical.

Le traitement médical était et est encore variable, selon la forme de la névralgie. On emploie la quinine à dose élevée, l'opium, l'aconitine, la morphine, la codéine, les bromures etc. Tous ces médicaments soulagent partiellement le patient, mais ils sont impuissants à le guérir. Lorsque l'état du patient le permet, les injections d'alcool au tronc nerveux sont, aujourd'hui, très en faveur et donnent de bons résultats pour un temps déterminé.

Winter, pour sa part préconise le traitement chirurgical, avec lequel, semble-t-il, il a obtenu de bons résultats. D'ailleurs Spiller, Cushing et Frazier sont aussi en faveur du traitement chirurgical. Celui-ci consiste à pratiquer la résection (névrectomie) de la branche douloureuse, et si elle ne suffit pas, on a recours à la résection du ganglion de Gasser.

Cependant, depuis quelques années, les recherches faites sur les vitamines nous ont fourni l'occasion de nous en servir en thérapeutique, et il semble bien que l'une d'elle, la thiamine ou vitamine B¹, dont l'action spécifique semble être essentielle au fonctionnement de toutes cellules vivantes, puisse jouer un rôle prépondérant dans divers traitements de névralgie.

De plus en plus, la littérature nous apporte des observations heureuses sur la vitaminothérapie B¹ dans certaines névralgies sciatiques, intercostales, crurales etc. Depuis quelques années, on s'est exercé à pratiquer cette médication chez les gens, qui souffrent de névralgie faciale et de tics douloureux, et dans la plupart des cas les succès ont dépassé les attentes.

F. Naar et le Dr Sliosberg, de France, rapportent un cas de névralgie faciale, essentielle, fruste, traitée par des injections quotidiennes sous-cutanées de vitamine B¹ synthétique (1 cg.). Dès la cinquième injection, on notait une amélioration nette et, après la huitième, la patiente était guérie. Gardée sous observation durant trois mois, elle ne s'est plainte d'aucune douleur, par la suite.

Geo. Christensen, D.D.S., nous fait part d'expériences analogues chez deux patients. Le premier souffrait de névralgie faciale d'origine inconnue. Le traitement fut institué et une série d'injections sous-cutanées de vitamine B¹ fut commencée au rythme de 2 mgm. dans un c.c., quotidiennement. Au quatrième jour, il y a déjà amélioration et, au sixième jour, soulagement complet. On prescrit une diète riche en vitamine B¹, et l'administration orale de 2 mgm. de vitamine B¹ par jour. Une semaine plus tard, il y a de nouveau apparition des symptômes. Une nouvelle série de six injections est entreprise et le patient, gardé sous observation durant huit mois, ne voit plus ses symptômes de névralgie réapparaître.

Le deuxième patient, qui souffre lui aussi de névralgie, ne ressent aucune amélioration après douze injections. Les résultats sont inconnus. Le docteur G. Christensen conclut, tout de même, que le nombre de succès obtenus lui permettent d'encourager l'emploi de la vitamine B¹ dans le traitement des névralgies du trijumeau d'origine obscure. "Dans certains cas, déclare-t-il, une déficience quelconque de vitamine B¹ peut être un facteur étiologique des douleurs faciales."

Enfin le rapport de Barsook et ses confrères indique que la thiamine possède une grande valeur dans le traitement de tic douloureux. Ces auteurs ont entrepris une étude s'étendant au-delà d'un an sur les effets d'une thérapie massive de vitamine B¹ pour le soulagement des névralgies majeures du trijumeau, dont 58 cas pour tic douloureux, 4 cas de névralgie sphéno-palatine (syndrome de Sluder) et 9 cas de névralgie faciale.

Le traitement fut divisé en deux parties, 1° l'administration de doses massives de vitamine B¹. 2° modification de la diète avec quelques suppléments nutritifs. La thérapeutique active consiste dans l'administration d'injections intra-veineuses de 10 mg. de chlorure de thiamine quotidiennement. Vingt-cinq pour cent des patients ne

répondirent pas au seul traitement de la vitamine B¹. On leur administra alors 15 U.S.P. dans 5 c.c. d'extrait de foie par voie intra-musculaire, 3 fois par semaine. Les résultats obtenus les encouragèrent à continuer. Enfin, pour les patients n'apportant aucune amélioration sensible après quelques mois, les doses de vitamine B¹ furent augmentées à 100 mg. par jour. Les auteurs font remarquer qu'il est très rare qu'on doive se rendre à une dose aussi massive, d'ailleurs aucun signe de toxicité n'a été remarqué.

La diète prescrite au patient consiste en une alimentation riche en hydrates de carbone et en vitamines B complexes.

La durée du traitement varie avec chacun et il est à remarquer que ceux qui guérissent rapidement (en moins d'un mois) sont maintenus dans cette voie par l'absorption quotidienne d'une once de vitamine B complexe concentrée. Ceux qui répondent tardivement au traitement doivent continuer à recevoir des injections de 10 mg. de vitamines B¹ par jour.

Les résultats obtenus sont des plus prometteurs. Sur 58 patients, 52 ont obtenu des améliorations. Les patients se répartissaient comme suit: 47 femmes, 11 hommes. Tous, moins 8, ont au-dessus de 50 ans. Un a 21 ans, onze ont au-dessus de 70 ans. Un patient souffrait de cette maladie depuis plus de 20 ans. Parmi ceux, qui ont obtenu une amélioration très marquée, il y en avait 7 au-dessus de 70 ans. Tous ces patients ont été sous observation durant des périodes variant de six à quatorze mois.

37 ont obtenu un soulagement très marqué.

15 ont obtenu un soulagement marqué.

3 ont obtenu un soulagement léger.

3 ont obtenu aucun soulagement.

Nous avons tenu à rapporter ces faits et ces observations cliniques, afin de bien démontrer la valeur thérapeutique de la vitamine B¹ dans les cas de névralgie faciale. Comment la vitamine B¹ peut-elle agir et améliorer cet

état? C'est encore l'objet de débats. Nous savons qu'au point de vue clinique une déficience de vitamines B est un facteur étiologique d'inflammation aiguë et d'infection dégénérative chronique du système nerveux. Or toute névralgie suppose nécessairement l'altération d'un nerf sensitif en un point quelconque de son origine, de son trajet ou de sa terminaison. Cette altération du nerf se traduit tantôt par des lésions, névrite, congestion, oedème e.c. Tantôt l'altération est purement dynamique, sans altération de structure ou de texture, et échappe à nos moyens d'investigation. Cette altération du nerf sensitif serait-elle due à la déficience de la vitamine B ou la vitamine B préviendrait-elle cette altération?

Quoiqu'il en soit, nous devons diriger nos recherches sur la vitaminothérapie B¹, si l'on désire trouver quelques alternatives au traitement le plus efficace encore trouvé pour la guérison du tic douloureux, qui consiste, comme nous l'avons dit au début, dans la section partielle ou totale des racines sensitives du ganglion de Gasser; et ce, pour plusieurs raisons. Un traitement chirurgical adéquat n'est pas pratique pour tous, soit que le patient ne veuille pas s'y soumettre, soit que le risque opératoire soit trop grand. Les traitements présents, dans leur ensemble demeurent insatisfaisants. L'inhalation de trichloroéthylène qui soulage quelques patients au début, devient généralement inefficace par la suite. L'injection d'alcool au tronc nerveux, qui est un traitement employé couramment, doit être répété à différentes périodes variant d'un mois à un an et même chez certains patients, ces injections n'ont apporté aucun soulagement, soit par la faute de l'opérateur ou soit par certaines conditions particulières du patient.

Par contre les avantages du traitement par la vitamine B¹ sont multiples. C'est un traitement qui peut être fait n'importe où et qui peut être pratiqué par n'importe lequel praticien et même, avec quelques instructions, le patient lui-même peut se traiter. De plus la

vitamine B¹ peut être administrée avec autant d'efficacité par voie sous-cutanée, intra-musculaire, ou intra-veineuse. Enfin la vitamine B¹ n'est pas toxique et est tolérée par tous généralement, car seul de très rares patients ont présenté certains symptômes d'allergie et seulement lorsqu'elle est administrée par voie intra-veineuse.

BIBLIOGRAPHIE

- WINTER: Operative Oral Surgery, 1943, 175-180.
 F. NAAR & Dr SLIOBERG: L'Odontologie, (1939-40), 201.
 Geo. CHRISTENSEN, D.D.S.: Dental Items of Interest, avril 1942: 317-319.
 BORSOOK, H. KREMERS, M. Y. and WIGGINS, C. G.; J.A.M.A. 114; 2191 (juin 1) 40
 VORHANS, M. G.: Am. J. Digest Dist. and Nutrition 3; 915 fév. 1937.

Expérience avec le fluor, à l'Université

La faculté de Chirurgie Dentaire de l'Université de Montréal vient de commencer une expérience intéressante sur la valeur du fluor dans la prévention de la carie dentaire. Ces épreuves sont entreprises sur les dents d'enfants d'une institution de charité, dont les âges varient entre 8 et 12 ans. Ces petits patients ont tous la même alimentation, le même régime de vie et sont tous d'un état de santé à peu près équivalent. Toutes les dents de ces enfants ont été examinées avec grand soin, avant le début de l'expérience, et ont été inscrites sur des dossiers à cet effet. Un certain nombre de ces enfants ne recevra pas de traitement, tandis que l'autre groupe sera traité de la façon décrite ci-dessous. À la fin de cette expérience, on comparera les résultats obtenus et on sera en mesure de porter un jugement sur la valeur prophylactique du fluorure de sodium.

Technique pour l'application du fluorure de sodium 2%

- 1) Prophylaxie.
 - 2) Isoler les dents: Au maxillaire supérieur, trois rouleaux de coton: un entre la lèvre et le segment des incisives, puis, un à chaque segment des molaires, c'est-à-dire à droite et à gauche.
 Maxillaire inférieur: mise en place du porte-rouleaux de coton avec deux rouleaux, un buccalement et un linguement.
 - 3) Assécher au moyen d'air comprimé, si possible.
 - 4) Vernir les silicates.
 - 5) Badigeonner au fluorure de sodium toutes les surfaces des dents isolées et permettre de sécher à l'air durant quatre minutes.
 - 6) Répéter l'opération pour le segment inférieur gauche.
 - 7) Le badigeonnage doit se faire à quatre reprises, à des intervalles d'une semaine.
- Ces expériences sont sous la direction du docteur J. Lane Charpentier.

Dentistes à l'emploi des corps publics

Il est proposé de tenir une réunion des dentistes intéressés au domaine de la Santé Dentaire Publique, au cours du congrès de l'Association Dentaire Canadienne, à la Malbaie, en juin. Le but de cette réunion est de discuter la possibilité de fonder une association de dentistes, qui s'occupent activement d'Hygiène Publique et qui sont au service de corps publics, tels que gouvernements fédéral ou provinciaux, municipalités, commissions scolaires, etc. Ceux qui désirent des renseignements au sujet de cette organisation, sont priés de s'adresser au Dr Hugh R. McLaren, Association Dentaire Canadienne, 211 rue Huron, Toronto.



PAGES EDITORIALES

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**GERARD DE MONTIGNY, B.A., D.D.S., M.Sc.D., L.C.D.
397 est Boul. S.-Joseph, Montréal**

Le congrès national de l'A.D.C.

Pour la première fois dans l'histoire de l'Association Dentaire Canadienne, les dentistes Canadiens-français de la province de Québec recevront tous les membres, leurs confrères des autres provinces, à un congrès, qui aura lieu, à la Malbaie, les 20, 21, 22, 23 et 24 juin. La Société de Stomatologie de la ville de Québec, formée de dentistes de notre langue, sera l'hôte de ces assises scientifiques.

Rien n'a été négligé pour faire de cette réunion la plus belle, la plus réussie de toutes celles, qui ont été tenues, depuis 1946, à Toronto, d'abord, et à Digby, Nouvelle-Ecosse, en 1947.

Le site enchanteur du Manoir Richelieu, à Murray Bay, son installation luxueuse, les facilités merveilleuses, dont il dispose (piscine, tennis, golf, pêche, terrasses, etc.) pour la récréation de ses invités, les routes fluviale et terrestres, qui y mènent, tous ces facteurs naturels et édifiés par l'homme moderne, vont faire ouvrir bien grands les yeux de nos confrères étrangers.

Pour plusieurs d'entre-eux, il s'agira de leur "découverte" du Québec, eux, qui croient que leur entourage d'origine est le plus beau du Canada.

Des confrères de la côte du Pacifique, de Vancouver et de Victoria, d'autres des régions des Rocheuses, d'autres d'Ontario, d'autres des provinces maritimes, retourneront chez eux l'esprit rempli des visions splendides du paysage québécois.

Le programme scientifique, qui paraissait dans la livraison d'avril du Journal, est des mieux équilibrés et de nature à satisfaire les plus difficiles. On y lit des noms de dentistes de réputation internationale, qui nous apporteront les conclusions de travaux de recherches élaborés durant ces dernières années.

On y trouve une liste de pellicules cinématographiques, qui, à elles seules, vaudraient le déplacement pour ce Congrès.

On y voit l'annonce de cliniques intéressantes et pratiques, qui seront répétées à différents intervalles, à des groupes différents, pour que chacun puisse voir et entendre de près les derniers perfectionnements de notre art professionnel.

L'horaire des récréations est agencé de façon à ne rien déranger au programme scientifique.

Les organisateurs ont fait une belle besogne; ils ont élaboré, dans un cadre unique au monde, une réunion dentaire bilingue, toute à l'honneur des dentistes canadiens-français. De quelle façon ceux-ci répondront-ils à l'invitation, qui leur est faite au nom de l'Association Dentaire Canadienne? Il faut espérer que nos confrères du Québec se rendront en grand nombre, à la Malbaie, en juin. Deux motifs principaux les y incitent:

1) il s'agit du congrès national de notre Association;

2) nous sommes, cette année, les hôtes des dentistes de notre pays et il ne conviendrait pas que les étrangers soient plus nombreux que les gens de chez-nous. Le congrès a lieu dans notre province et il est facile d'y assister sans beaucoup de frais et de dérangement. L'an prochain, il se déroulera dans l'Ouest, à Saskatoon, et il sera assez onéreux et assez long pour les dentistes de Québec de s'y rendre. Profitons-en, cette année. Le nombre des chambres et des chalets du Manoir Richelieu est limité et il serait bon, si on ne veut pas loger loin du centre des activités, de retenir sa place tout de suite. Nous sommes assurés d'avance de l'excellence et de la valeur de ce congrès de 1948.

GERARD DE MONTIGNY.

Dans le monde dentaire

Honneur à l'un des nôtres

Le docteur J. Lane Charpentier vient d'être nommé président de la section canadienne de l'ARPA, qui est une organisation suisse s'occupant de promouvoir la recherche sur les causes, le traitement et la prévention de la pyorrhée alvéolaire, dans le monde entier. De plus, le docteur Charpentier, professeur titulaire de Périodontie à la faculté de Chirurgie Dentaire de l'Université de Montréal, a été nommé, récemment, membre actif de l'American Academy of Periodontology.

Le rédacteur de la section française du Journal devient aussi correspondant du Canada au journal "Paradentologie",

revue scientifique éditée par l'ARPA internationale.

Cérémonie à la mémoire du docteur Joseph Nolin

Samedi matin, le 13 mars 1948, la faculté de Chirurgie Dentaire de l'Université de Montréal a rendu hommage à la mémoire du docteur Joseph Nolin, qui fut co-fondateur de cette faculté et son vice-doyen, durant au delà de quarante ans.

En présence des professeurs, des élèves et du personnel, réunis dans l'amphithéâtre, et en face du buste du docteur Nolin, sculpté par sa fille, Mlle Alice

Nolin, Monseigneur le Recteur, Olivier Maurault, a fait l'éloge du disparu, en retraçant sa carrière de praticien et de professeur et en appuyant sur les qualités de culture générale du docteur Nolin, qui fut un homme de science, un artiste et un littérateur.

Le doyen, le docteur Ernest Charron, dit la grande perte, que subissait toute l'Université de Montréal, en perdant un homme distingué comme le docteur Nolin.

Le docteur Charron relata la tâche immense qu'avait réalisée le docteur Nolin, en organisant le programme d'études de la faculté et fit ressortir le côté profondément humain du vice-doyen décédé, qu'on se plaisait à nommer "papa Nolin".

Après avoir observé quelques minutes de silence, l'assistance écouta avec émotion la lecture de poésies écrites par le docteur Nolin, entr'autres "Testament", faite par le docteur Gérard de Montigny.

Messieurs Duquet et Jean Nolin, fils du défunt, assistaient à cette cérémonie touchante, qui marquait la grande estime, que tous éprouvaient à l'endroit du docteur Nolin.

Nouveaux règlements du Collège des Chirurgiens-Dentistes

La loi des dentistes a été modifiée à la Législature de Québec par le comité des bills publics de l'Assemblée législative, siégeant sous la présidence de l'honorable Maurice Duplessis. Cette loi a ensuite été sanctionnée, quelques jours plus tard, par le Conseil Législatif. La loi nouvelle comporte une nouvelle constitution du bureau des gouverneurs, qui sera désormais constitué de 26 gouverneurs élus parmi les membres du collège des dentistes et de neuf autres gouverneurs représentant les facultés de chirurgie dentaire des diverses universités et les sociétés d'études scientifiques dentaires.

Une autre clause importante de cette législation a trait à ce qu'à l'avenir, la citoyenneté canadienne sera obligatoire pour être admis à l'étude de la chirurgie dentaire dans la province de Québec.

Cette loi resserrera les pouvoirs accordés aux techniciens et il leur faudra une ordonnance spéciale signée par un dentiste

pour entreprendre des travaux de prothèse dentaire. On a de plus décidé que tout recours en dommages contre un dentiste, pour une faute commise dans l'exercice de sa profession, se prescrit après deux années.

Enfin, cette loi permet aux dentistes de former leurs propres techniciens et sous-trait ces derniers à la régie de l'Association des Techniciens, s'ils sont placés sous la responsabilité directe de leur employeur, le dentiste.

Nouveau représentant pour l'Ontario

Le Collège des Dentistes de l'Ontario vient de nommer le docteur H. L. Field, 505 Medical Arts Bldg., Hamilton, comme représentant au Bureau des Gouverneurs de l'A.D.C., pour remplacer le docteur Giffen, décédé.

Nominations

La mort du docteur J. F. Griffen a créé des vides au sein de plusieurs comités. Le Comité des Nominations, après avoir pris connaissance de ces vacances, a nommé les membres suivants aux postes occupés, avant sa mort, par le docteur Giffen:

Membre du Comité des Publications:

le docteur E. C. Aho, 86 rue Bloor, Toronto.

Membre du Conseil d'Education Dentaire:

le docteur Harvey W. Reid, 195 rue Yonge, Toronto.

Membre du Comité Exécutif:

le docteur Harvey W. Reid, 195 rue Yonge, Toronto.

Traitements dentaires aux Indiens

Il arrive parfois qu'il y ait des malentendus au sujet des traitements dentaires donnés aux Indiens, qui dépendent du Ministère de la Santé et du Bien-Etre National.

Il faut noter que:

1) Aucun dentiste ne doit entreprendre de traitements dentaires aux Indiens, sans au préalable, avoir été autorisé à le faire par le Ministère de la Santé Nationale et du Bien-Etre Social.

2) L'Association Dentaire Canadienne n'a approuvé aucune liste d'honoraires du Ministère en question. Des mémoires furent soumis par l'Association, mais aucune décision ne fut encore prise.

Elèves finissants de la faculté

Quarante-et-un nouveaux confrères ont été diplômés de la faculté de Chirurgie Dentaire de l'Université de Montréal, en mai dernier. On verra ci-bas, les noms de ces nouveaux dentistes, suivis de l'endroit où ils comptent exercer leur profession.

Adam, Albert	Cabano
Barthe, Maurice	Loretteville
Bédard, Maurice	St-Hyacinthe
Boisvert, Alfred	Windsor Mills
Boudreau, Delbert	Gravelbourg, Sask.
Bourget, Marie-Louis	Québec
Caisse, Gérard	Montréal
Cantin, Rosaire	Québec
Caron, Léonard	Rivière-du-Loup
Chagnon, Fernando	Victoriaville
Charest, Armand	Plessisville
Cloutier, Rosaire	Trois-Rivières
Couture, Jean-Paul	Verdun
Demers, Ludovic	Rouyn
Desbiens, Philippe	Laprairie
Dolbec, Jacques	Shawinigan
Dorfman, Oscar	Montréal
Gauthier, Jacques	Montréal
Génier, Percival	St-Jean, P.Qué.
Houle, Rodrigue	Drummondville
Jeannotte, Georges	Mont-Laurier
Lalonde, Fernand	Montréal
Lamontagne, Gustave	Québec
Larochelle, J.-Paul	Brunswick, Maine
Lévesque, Ivan	Ste-Anne-de-Bellevue
Manègre, Jacques	St-Joseph-de-Sorel
Mathieu, Léopold	Montréal
Morin, Roger	St-Raymond, Portneuf
Normand, Paul-Emile	Ville Jacques-Cartier
Pelletier, Armand	Montréal-Nord
Poirier, Guy	Montréal-Lachine
Rivard, Pauline	Montréal
Sicotte, Richard-Louis	Valleyfield
Simard, Paul	Edmundston, N.-B.
Sylvestre, Gérard	Drummondville
Talbot, Jules	Baie St-Paul
Tardif, Gérard	Québec
Terriault, Florent	Lachute
Thibault, Marc	St-Joseph-de-Sorel
Touchette, Gérald	Verdun
Tremblay, Vincent	Montréal

Réunion du Comité Exécutif

Le Comité Exécutif de l'A.D.C. s'est réuni, à Toronto, les 1er et 2 mars 1948. Des affaires de routine furent discutées et des projets furent élaborés pour la réunion annuelle de juin prochain. Un résumé des chefs de discussion est donné ci-bas:

a) Assurance-Groupe:

Un Comité spécial chargé d'étudier cette question a soumis un rapport intérimaire pour établir un plan d'assurance-groupe. Ce plan sera présenté, avec amendements, à la réunion du Bureau des Gouverneurs, en juin prochain, pour être adopté.

b) *Project d'association des dentistes s'occupant de santé publique:*

On a présenté au Comité Exécutif un projet de constitution pour grouper en association les dentistes, qui sont à l'emploi de corps publics, en demandant à l'A.D.C. son approbation et la permission de convoquer une réunion des dentistes intéressés, durant le Congrès National des Dentistes Canadiens, à la Malbaie. Le Comité a décidé d'approuver en principe la formation d'une telle association et de permettre la tenue d'une assemblée de ces dentistes au cours du Congrès.

c) *Fédération Dentaire Internationale*

La correspondance échangée entre le secrétaire de la F.D.I. et l'A.D.C. au sujet de l'approbation et du support financier de la F.D.I. fut produite. Le Comité s'entendit pour donner à cette organisation tout le support possible et pour qu'une campagne de recrutement soit amorcée par le Comité des Relations Internationales chez les membres de l'A.D.C.

d) *Publication de la liste des membres*

Il a été décidé que la liste des membres de l'A.D.C. serait, à l'avenir publiée tous les deux ans, au lieu de tous les ans, à cause des frais considérables exigés par cette publication. La liste prochaine sera publiée en décembre 1949.

Nécrologie

JOSEPH NOLIN

*"Nature, qui te fais belle tout
entière*

*Pour calmer nos soucis et sécher
nos pleurs*

*Va, borde le chemin de chants
et de fleurs*

*Où passe mon ami, vers le cime-
tière."*

JOSEPH NOLIN (IN MEMORIAM)

Les chirurgiens-dentistes ont appris avec tristesse la mort de celui qu'ils ont toujours aimé: le docteur Joseph Nolin.

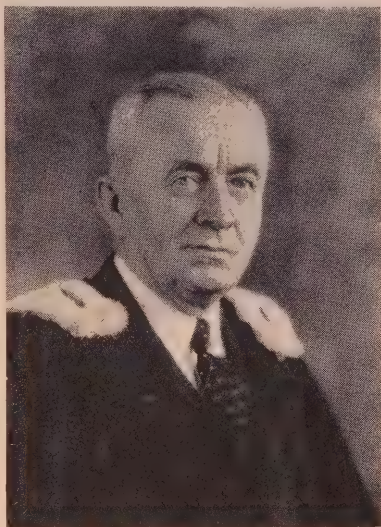
Né le 23 mars 1863 à Saint-Jean d'Iberville, il est décédé le 11 mars, à son domicile, 1470 rue Chomedey, à Montréal.

L'instruction du docteur Nolin, commencée dans sa ville natale, se continua à l'université d'Ottawa, sous la surveillance de son frère aîné, oblat de Marie Immaculée; il y étudia l'anglais, dont la parfaite connaissance lui attira, en autres choses, l'amitié de ses confrères étrangers qui le nommaient "dear old Nolan"; grâce à son frère, il apprit à apprécier les beautés de la littérature française, dont il ne cessa jamais de cultiver les Muses; au Cercle Universitaire, il y quelques années, il versifia, durant une heure au moins, sur les beautés de la figure humaine devant un auditoire d'élites avec, comme preuve à l'appui, des dessins qu'il esquissait lui-même prouvant que quelques traits de crayon peuvent changer une expression.

Ses humanités terminées, il lui fallut embrasser une carrière. J'avoue que le problème était des plus complexes pour un sujet de dix-neuf ans, si bien équilibré, dont les qualités et les aptitudes intellectuelles lui promettaient le succès, dans n'importe quelle profession libérale. Il opta pour la chirurgie dentaire; il s'inscrit, comme étudiant, chez le docteur William George Beers; en 1885, étant licencié de la province de Québec, il alla se perfectionner aux Etats-Unis et obtint un doctorat en chirurgie dentaire du "Philadelphia College of Dentistry".

Revenu au pays, il s'installe dans la ville de Sorel, où, en 1892, il épousait mademoiselle Lucina Boucher; de ce mariage naquirent plu-

sieurs enfants, dont quatre sont encore vivants; lui survivent aussi des petits-enfants et des arrière-petits-enfants. Vers 1899, il déménage ses pénates à Montréal, où ses talents seront mieux appréciés. Ses confrères le nomment à deux reprises président du Collège des Chirurgiens-Dentistes de la province de Québec et en 1908, président de l'Association Dentaire Canadienne.



M. le docteur Joseph Nolin

En 1904, les docteurs Eudore Dubeau et J. G. A. Gendreau et lui-même fondent l'école dentaire française Laval, laquelle est devenue la Faculté de Chirurgie Dentaire de l'université de Montréal. Son amour de l'enseignement lui fera abandonner peu à peu son cabinet dentaire pour s'occuper exclusivement des cours et de la régie de la Faculté. En 1943, le conseil de la Faculté le nommait professeur émérite et, le 26 mai 1944, l'Université lui décernait un parchemin de "Docteur en Chirurgie Dentaire, Honoris Causa" en reconnaissance des nombreuses années passées au service du professorat, pendant lesquelles, il avait formé une brillante phalange de praticiens.

Ses qualités de chef en avaient fait un ami sûr et sincère, dont les conseils étaient toujours imprégnés d'une grande sagesse. Aurait-il écrit-d'avantage? Ses écrits n'auraient pas été plus utiles qu'ont été ses paroles et son enseignement, pour assurer la permanence de son oeuvre.

Sa mort suscite des regrets dans tous les milieux, surtout parmi ses anciens élèves, qui en gardent le meilleur souvenir, et tous les chirurgiens-dentistes prient madame Nolin et les membres de la famille d'accepter leurs condoléances.

PAUL-E. POITRAS

Du charlatanisme vers la raison

par AMHERST HEBERT, D.D.S., Montréal

Les médecins fêtent cette année le centième anniversaire de l'organisation du Bureau de Médecins dans notre province. Nous tenterons de brosser une courte esquisse de l'évolution de cette science médicale à travers les siècles.

Les chercheurs qui fouillent l'histoire de la thérapeutique sont surpris de l'extrême lenteur des progrès réalisés. Nous ne parlons pas de la chirurgie . . . mais de la médecine. Est-on beaucoup plus avancé aujourd'hui qu'au temps d'Hippocrate et de Galien? Assurément, il y a eu des progrès qu'il serait absurde de contester. Il est vrai, et nous le disons immédiatement, pour ne pas décourager nos lecteurs et adoucir notre pessimisme, que diverses branches issues de la thérapeutique, ont réalisé de tels progrès que depuis trente ans, la moyenne de la vie humaine a augmenté . . . c'est presque trop beau.

Au moyen âge, les progrès furent lents parce qu'il furent immobilisés par la scolastique. C'est d'une puissante originalité. Les développements se sont faits en ces longs siècles d'une manière toute pratique, toute empirique. C'est ce qui explique encore de nos jours la grande influence et le rôle joué par les sorcières, êtres redoutés et haïs. C'est Paracelse, génial médecin de la Renaissance, qui en brûlant les livres de doctrine en usage jusqu'à lui, avouera que tout ce qu'il a appris d'utile et de bienfaisant en thérapeutique, il l'a trouvé dans les grimoires des sorcières. N'allons pas trop vite nous révolter contre la bêtise de la croyance . . . nous devrions dire de la crédulité populaire. Le nom de Marat, le sanguinaire révolutionnaire, occupe une place digne d'attention dans l'histoire de thérapeutique. Il fut l'un

des premiers à soigner ses patients à l'électricité. Est-ce lui qui montra la route à Charcot? Ce qui avait fait la vogue de Marat comme médecin quelques années avant la Révolution, ce fut la merveilleuse cure de la marquise de Lanbesline . . . "pulmonique" disait-on. La vérité est que Madame de Lanbesline avait un mari qui était un triste individu. Comme elle se consumait d'ennui et de chagrin et était ce que nous appellerions de nos jours neurasthénique, Marat lui fit prendre un certain nombre de drogues de sa composition . . . mais surtout, il la rendit amoureuse de lui. Ce qui fit que quelques mois passés, la neurasthénique marquise se trouva entièrement rétablie. Tout comme présentement nous retrouvons la grande influence du moral sur la thérapeutique. Hippocrate l'avait pressentie et nous savons tous la place que le moral des patients occupe dans la médecine moderne.

"Nihil temere Affirmandum. Nihil contemnendum"
Hippocrate

L'art de guérir est en perpétuelle évolution. Les doctrines d'hier et celles d'aujourd'hui font une aurore et un crépuscule, s'avivant l'une par les autres, cachant l'obstacle juste pour que l'on l'y voit après s'y être buté. Comme Pascal l'écrivit: "Toute la suite des hommes, pendant la série des siècles, peut être considérée comme un même homme qui subsiste et apprend continuellement." Que de connaissances nouvelles depuis cent ans. Tant en Art Dentaire qu'en Médecine. La thérapeutique expérimentale, reine de la science médicale actuelle, est née de l'empirisme, fils de la tradition.

Nous nous devons de ne pas médire de

l'empirisme qui a précédé les découvertes modernes et les a préparées. Sans vouloir nous extasier sur le génie des Anciens, il n'est certes pas téméraire d'affirmer qu'ils ne furent pas des ignorants. Après tout, tous ceux qui s'occupent de l'art de guérir et qui s'en occupèrent dans le passé ne furent que d'excellents observateurs, sachant tirer de l'étude des faits d'ingénieuses déductions. Il serait du plus lourd ridicule de croire que le jugement n'ait eu sa place dans le cerveau humain qu'à partir d'un siècle déterminé. Les légendes ne seront toujours que de l'histoire agrandie par l'imagination du peuple.

Les Anciens connaissaient l'aconit et sa redoutable toxicité. Le lierre combattait l'ivresse . . . c'est pourquoi Bacchus est représenté le front auréolé de branches de cet arbuste. Le laurier cerise rendait fou. La pythie de Delphes devait en mâcher quelques feuilles. Est-ce que l'acide cyanhydrique contenue dans cette plante disposait la Sybille aux vertiges, aux convulsions, à la fureur qui frappaient le peuple d'une si respectueuse épouvante? Les qualités thérapeutiques du pavot étaient aussi connues. N'est-ce pas une infusion de cette plante qui guérit la déesse Cères dans une crise de mélancolie aiguë? Deiphobe, maîtresse d'Apollon, remit à Enée, prêt à descendre aux enfers, des boulettes composées de miel et de pavot pour endormir la vigilance du Cerbère. Si nous voulions jongler en thérapeutique mythologique, nous n'en finirions pas de ramasser un peu partout toute une série d'observations pratiques.

Automatiquement, à cause des circonstances, la thérapeutique sacerdotale fit suite à la thérapeutique mythologique . . . la thérapeutique grecque. La thérapeutique romaine prit les allures du charlatanisme, de l'empirisme impudent. C'est dans la thérapeutique romaine que l'on proclame que les os trouvés dans les excréments d'un loup guérissent le mal de dents. "Cracher dans la gueule d'une grenouille produit le même effet". La dent de Loup portée en amulette évite les convulsions d'origine dentaire et les terreurs infantiles.

Au Moyen Age, l'Ecole de Montpellier est dépositaire de la science médicale. La

Renaissance fut une véritable révolution. L'émancipation secoua la torpeur des esprits et sema dans le monde des idées nouvelles; la syphilis fit son apparition lors de la Renaissance. Cette maladie était connue sous le nom de vérole. "Cette maladie, écrit l'austère Montesquieu, inconnue à nos pères passa du nouveau monde dans celui-ci et vint attaquer la nature humaine dans la source de la vie et de ses plaisirs." L'antiquité dut ignorer ce mal que les Français appellent napolitain et que les Napolitains appellent français.

Sous Louis XIV, Molière montra le ridicule, l'intolérance et la routine dans laquelle se débattait une collectivité cramponnée à ses préjugés. Malgré ses défauts, le XVII^e siècle restera tant au point de vue médical comme à bien d'autres, le Grand Siècle. Ses titres de gloire compensent ses erreurs. La découverte de la circulation du sang, des chylifères, l'anatomie microscopique, le quinquina suffisent à lui assurer une place éminente dans l'histoire de la médecine expérimentale.

La période contemporaine voit apparaître la médecine physiologique de Broussais. La découverte de l'auscultation suffit à immortaliser le nom de Laënnec. C'est à ce moment que le salicylate de soude fit son entrée dans le domaine thérapeutique. Et de nos jours, ce domaine s'enrichit davantage avec l'antipyrine, l'exalgine, la phénacétine, les cacodylates, etc. Pasteur a fait surgir des faits nouveaux. Une connaissance plus approfondie des lois biologiques et biochimiques a permis à l'opothérapie de rentrer dans la science rationnelle et l'étude est loin d'être terminée.

A cause des facteurs économiques et sociaux, la Chirurgie-Dentaire a évolué plus vite. La théorie de notre art est française. L'américain, homme pratique, appliqua avec l'ingéniosité qui le caractérise ces principes scientifiques. Nous irons plus loin en alléguant que subissant l'influence américaine, nos écoles dentaires du temps ont attaché plus d'importance au côté technique qu'au côté scientifique. Sans vouloir brûler ce que nous avons adoré, la Faculté de Chirurgie Dentaire de Montréal pose un beau geste en voulant se rapprocher de notre mère la médecine.

cine. Malgré les flagorneurs à la lune, nous sommes convaincus que la Chirurgie dentaire n'est qu'une spécialité de la médecine . . . et c'est parce qu'il y eut de l'incompréhension que nous nous sommes orientés vers la prothèse dentaire sans tenir compte de la diète et de la nutrition. Nous en subissons les tristes conséquences . . . et les pauvres édentés . . . donc! Ce fut une erreur funeste pour nos concitoyens. Pour mieux comprendre et surtout démêler l'écheveau des intrigues, nous avons cherché des renseignements dans l'histoire dentaire en Amérique du Nord. Voici les faits.

Le premier chirurgien-dentiste est un médecin. Le Dr Aldis Bernard fit ses études dentaires aux Etats-Unis. Jusqu'en 1869, les médecins pouvaient pratiquer l'Art Dentaire. Si nous jetons un coup d'œil en arrière, nous devons nous rappeler qu'en 1844, Montréal était la capitale du Canada. A ce temps, le Dr Aldis Bernard avait préparé un bill . . . mais comme les édifices parlementaires furent détruits, le bill présenté eut le sort que l'on sait. Sur ce bill le Dr Bernard demandait au gouvernement canadien l'autorisation d'incorporer les chirurgiens-dentistes. Après l'incendie des locaux du parlement de Bas-Canada (Québec), le cabinet de coalition Baldwin-Lafontaine fut renversé et remplacé en 1847 par le gouvernement d'Union Viger-Draper. L'un pour le Haut-Canada, l'autre pour le Bas-Canada. A cause des circonstances du temps, le Dr Bernard était donc dans l'opposition, et son projet renvoyé aux calendes grecques.

En 1869, le 4 mars, un autre bill fut présenté et accepté . . . et c'est à partir de 1869 que les chirurgiens-dentistes purent avoir leur corporation. A part l'extraction, peu de médecins firent de la dentisterie sérieuse. Les médecins peuvent pratiquer l'art dentaire sans s'annoncer. Pour ce faire de nos jours, le médecin doit faire un stage d'études spécialisées. Encore les médecins de campagne ou de centres éloignés font de l'extraction. Nous ne connaissons que deux médecins qui pratiquèrent l'art dentaire (obturations, pièces de prothèse complètes ou partielles). Ce sont les Drs Desrosiers, à

l'Ile Verte, et Laurendeau, à St-Gabriel de Brandon. Il a trente ans et plus.

Nos origines datent de 1840 avec l'incorporation du Baltimore Dental School avec Harris et Hayden. L'université du Maryland avait refusé de donner des cours spécialisés pour les chirurgiens-dentistes. Hayden et Harris obtinrent une charte de l'état du Maryland pour une école exclusivement dentaire. La première école ouvrit ses portes à Baltimore.

En Angleterre, l'art dentaire commença à se manifester comme une science avec Sir John Tomes (canalicules de Tomes) dentiste de la reine Victoria. Sir John Tomes était médecin et pratiqua l'art dentaire à l'hôpital Guy de Londres, où une clinique dentaire était sous sa direction. Les écoles se formèrent par la suite. Le premier titre de chirurgien dentiste de l'Empire Britannique fut donné en 1889 par l'Université de Toronto.

En 1902, à Montréal, il y eut l'Association Dentaire Canadienne avec F. S. Stevenson, comme président et le Dr Eudore Dubeau comme secrétaire et second président.

L'école française fut reconnue en 1891-92. Après la révolution, sous Louis XVI, toutes les professions devinrent libres. Le charlatanisme a pris les devants et c'est en 1892 qu'une loi fut promulguée autorisant une organisation fermée de la Chirurgie Dentaire.

Nous avons tenté cette chevauchée maladroite dans les dédales de nos deux professions. Lentement, la lumière se fait et armés d'une technique qui se fait de plus en plus précise, nous comprendrons mieux des phénomènes devant lesquels nos ancêtres restaient ébahis. Ces prédécesseurs ne doivent pas être dédaignés parce que la vérité scientifique est: "Fille du temps et non pas d'un cerveau."

BIBLIOGRAPHIE

Commémoration du Baltimore College of Dental Surgery. Dr Paul Poitras *Journal de l'Association Dentaire Canadienne*, mai 1940, juin 1940, juillet et août, 1940.

Lien Médical, juillet 1926 et décembre 1930.

Evolutions des thérapeutiques, Dr Mousson-Lanauze. A la Maison de Piperazine Midy.



Photo by Dr. J. S. Bricker, Vancouver, British Columbia

"ATHABASCA GLACIER"

● 83 miles from Lake Louise, along the Banff-Jasper Highway, at the Columbia Ice Field Chalet, one of the wonders of the scenic world is the hydrographic centre of the Columbia Ice Field. This field is estimated to be 150 square miles in area. Its melting glaciers form the source of streams that reach three oceans, the Atlantic through the Hudson's Bay, the Pacific and the Arctic.

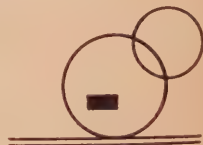
The birth of Sunwapta river (in foreground) is from the Athabasca Glacier and joins the Athabasca river 40 miles along the highway. A short road leads to the moraine at the tongue of the Athabasca Glacier. One may walk, ride or ski on this seven mile tongue. From the chalet, over 6000 feet altitude, the magnitude and extent of the view is awe inspiring.





RALPH DALGLEISH, D.D.S.,
Sydney, Nova Scotia.

Veteran of World War One.
Graduate of Dalhousie in 1924.
Past President of Nova Scotia
Dental Association.
Member of Nova Scotia Dental
Board 1942-1946.



AN IMPROVED METHOD FOR PROCESSING ACRYLIC DENTURES*

by D. R. CHRISTIE†

INTRODUCTION

DURING the last two years, investigations on several problems connected with the compression moulding of methyl methacrylate denture base material have been carried out at the Ontario Research Foundation. This work was started at the request of the Canadian Dental Corps and has been supported in large part by grants from the National Research Council through the Associate Committee on Dental Research.

The program was concerned chiefly with the development of a rapid method for processing dentures with the elimination of porosity. Attention was also directed to the problems of polymerization shrinkage, trial packing, polishing by chemical methods and repairs without distortion.

Various aspects of these problems will be dealt with in succeeding sections of this paper.

PHYSICAL PROPERTIES OF METHYL METHACRYLATE

Monomeric methyl methacrylate is a colourless liquid whose chemical formula is $\text{CH}_2=\text{C}(\text{CH}_3)\text{COOCH}_3$. Its specific gravity at 20° C is 0.945 and its boiling point at 760mm. pressure is 100.3° C. Methyl methacrylate polymer is a clear, colourless solid whose specific gravity at 20° C. is 1.19.

In making dentures, it is convenient to prepare a mixture of one part of monomer to three parts by volume of polymer powder which consists of fine granules or spheres. This mixture is packed into a mould under pressure and the monomeric component is converted to the polymerized form by heat.

The completely polymerized denture base material has a softening point of approximately 185° F. Its water solubility is less than 0.1 per cent.

It will be seen from the figures above that there is a volumetric change on polymerization of the monomer of about 21 per cent. However, since the monomer represents only a fraction of the mixture of monomer and polymer powder used to make a denture, this value will be reduced accordingly. Values in the literature^{1, 10, 12, 14} for the linear polymerization shrinkage of denture base material are about 0.35 to 0.5 per cent. These figures are less than the theoretical values based on volumetric shrinkage and may be caused by the restraining influences of a complex mould shape.

Polymerized methyl methacrylate denture base material absorbs water to the extent of approximately one per cent of its weight¹⁴. In terms of dimensional changes, it is reported^{1, 10, 12, 14}, that this water sorption may cause a linear expansion across the

* This project was financed in large part by a grant from the National Research Council, through the Associate Committee on Dental Research.

† Research Fellow, Ontario Research Foundation, Toronto, Ontario.

ridges of a denture of 0.3 to 0.5 per cent. This expansion nearly compensates for the polymerization shrinkage so that the net change in linear dimension (the difference between polymerization shrinkage and expansion due to water sorption) is very small and of little practical importance.

Methyl methacrylate has been chosen as a suitable denture base material because it has good colour stability, it is strong, hard, and light in weight, because it can be suitably pigmented to give an excellent life-like appearance, because it remains relatively clean in the mouth and also because it can be easily moulded at low pressures and cured at reasonably low temperatures. It is not a completely satisfactory denture base material, as this paper will make clear in subsequent sections, but if used in a suitable manner, highly efficient results can be expected.

MIXING OF MONOMER AND POLYMER

As previously stated, the monomer (liquid) and polymer (powder) are mixed in the ratio of about 1:3 by volume. Manufacturers' directions are usually sent out with all materials specifying the quantities to be used. In practice these quantities can be varied within small limits and it is best to use the minimum amount of liquid for two reasons. Because methyl methacrylate has a large volumetric shrinkage on polymerization, the smaller the quantity of monomer in the mixture, the smaller the shrinkage will be. Also, a great excess of monomer will cause a type of porosity which is characterized by large localized pits or bubbles in the finished denture base.

It is good practice to add the powder to the liquid. In this way, the globules of polymer are more likely to be evenly wetted by the monomer. Some stirring is necessary to ensure that the liquid and the pigment on the powder particles are evenly distributed through the mixture. The monomer is a solvent for the powder and the mix passes through an initial stage when it resembles wet sand, to a sticky stage and

then to a doughy consistency when it is ready for trial-packing.

The time required for these changes to take place varies with temperature but is usually 20 to 30 minutes. If the powder and liquid are placed in a cold jar and put in a refrigerator, the mix requires many hours to reach a workable stage and may be used several days after that.

In this work the commercially available powder and liquid forms of Lucitone were used, for no other reasons than that it is readily available and is a representative acrylic denture base material.

TRIAL-PACKING³

It would not be feasible to eliminate trial-packing by calculating the quantity of resin to use on the basis of the ratio of the weights of the resin and the wax model. The model is usually a combination of wax and base plate material in varying amounts and frequently contains voids which would upset any calculations.

With some experience the number of flask closures can be reduced to a minimum. If the first trial-pack is made with enough of the resin mixture, the mould will be filled and a flash will be produced. In addition, the resin will be compressed enough so that no defects will result on processing. The flash can be trimmed off, a slight excess added and the dental flask closed in a spring-compress ready for curing. If small channels are cut in the land of the investment and extended through corresponding channels in the walls of the flask, the excess of resin can flow into them without danger of forcing the halves of the flask apart, thus "opening the bite", and this excess will also compensate to some extent for the shrinkage on curing.

DESCRIPTION OF THE POLYMERIZATION PROCESS

Methyl methacrylate polymerizes readily under the influence of heat, light and catalysts such as benzoyl peroxide. The reaction is exothermic and

eventually becomes auto-catalytic in that as the heat of polymerization is developed, the reaction proceeds more rapidly. Eventually the polymerization goes so rapidly that a considerable evolution of heat results. Since the plaster investment and the denture base material itself are very poor heat conductors, there is a strong tendency for very high localized temperatures to develop in the resin.

For example, when a powder-liquid mixture of methyl methacrylate denture base material is cured rapidly, the following usually occurs. The temperature of the resin increases gradually from its initial temperature to approximately 185° F. where suddenly the temperature increases very rapidly and may rise as high as 280° F. It falls

again just as quickly but, in this short space of perhaps a minute or two, considerable damage may result to the denture. Fig. 1 is a temperature-time graph of a typical rapid polymerization, the temperatures being measured by thermo-couples inserted in the resin.

To control this reaction, some means must be provided for the heat of polymerization to be conducted away as fast as it develops. In the usual methods of denture making, the resin temperature can only be prevented from rising too high by keeping the ambient temperature as low as possible until polymerization is nearly complete. After a considerable degree of polymerization has occurred, it is safe to raise the ambient temperature without damaging the restoration.

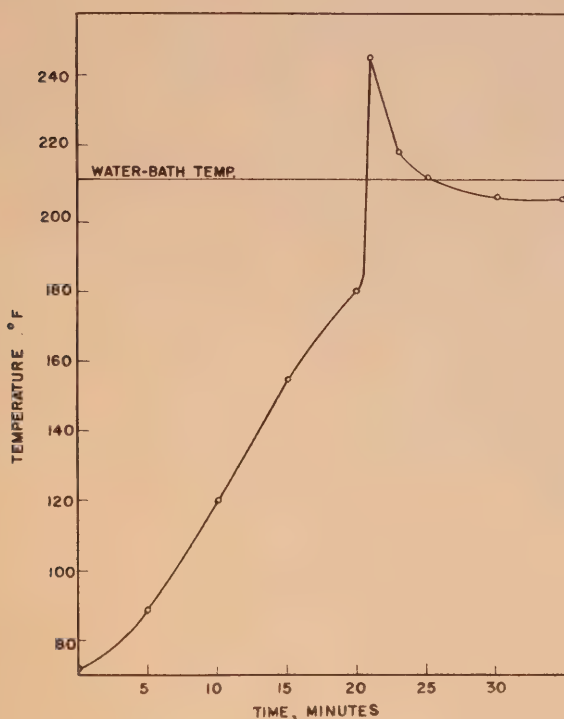


FIGURE 1.

Most curing techniques are adapted to this end. They make use of relatively low water-bath temperatures for considerable lengths of time followed by higher temperatures.

POROSITY

One of the most commonly occurring defects in processed acrylic dentures is porosity. It has received the attention of numerous investigators^{2, 9, 14, 16}, since the acrylics first came into general use and at least five causes have been presented for its occurrence. Two of these will be dealt with briefly.

(1) *Insufficient Pressure*

It has been reported^{4, 14}, that the bubbles occurring in this type of porosity are partial vacuums. It can be avoided by ensuring that sufficient material is present in the mould so that a positive pressure can be applied during the cure. Fig. 2 shows a photograph of a denture which was deliberately made with insufficient material in the mould to illustrate this kind of porosity.

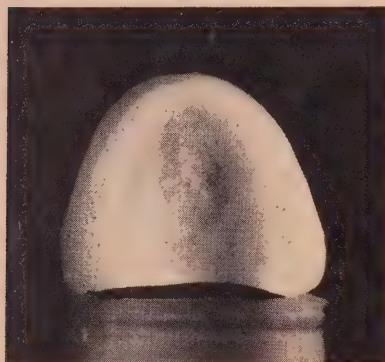


FIGURE 2.

(2) *Volatilization of the Monomer*

This is the most common cause of porosity. If the temperature of the resin greatly exceeds the boiling point of the monomer (100.3° C.) while it is still soft enough to flow, bubbles will form. This almost always happens if the cure is too rapid. It is the result of the exothermic reaction and the poor thermal conductivity of the plastic it-

self and the plaster and stone investment. When porosity occurs, it is more apt to do so in areas where the greatest bulk of resin exists or in the positions where the resin is nearest to the centre of the investment.

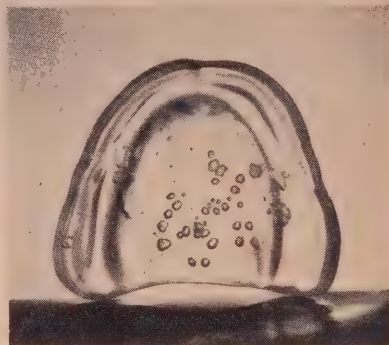


FIGURE 3.

Fig. 3 illustrates this type of porosity. This edentulous case was processed by immersing the dental flask in a boiling water-bath. Even though provision was made to conduct away the heat of polymerization by means of thermocouples (this will be explained more fully in a later section), porosity resulted.

INTERNAL STRAINS¹¹

It is virtually impossible to mould a denture without some internal strains in it, because the investment materials (plaster and stone), the teeth (porcelain) and the denture base material all have different coefficients of thermal expansion. Strains resulting from these properties cannot be removed by an annealing process.

However, all strains are not important from the point of view of subsequent distortion during use. Only those which relieve themselves and cause the denture to warp are significant.

If temperature differences occur during polymerization, local strains may quite easily be formed because of differences in degree of polymerization in various parts of the resin. Similarly, temperature differentials should be

avoided in cooling a processed denture, therefore slow cooling is advisable.

It has been the object of the curing method which was developed at the Ontario Research Foundation, and which will be outlined later, to minimize strains by controlling the temperature of polymerization by eliminating local temperature effects and also by controlling the cooling rate.

OBSERVATIONS OF STRAINS

There are four methods of observing strains in a denture.

(1) *Heating in Water*

As the denture base material is heated in water and approaches its softening point, strains are relieved and warpage or distortion occurs. Investigations have shown that dentures will withstand temperatures up to 185° F., for 5 minutes at least, without showing any appreciable distortion. Above this temperature distortion becomes increasingly pronounced until at 212° F. it is quite severe. This does not mean that the dentures are unusable, only that in use they should never be immersed in very hot water.

(2) *Observation in Polarized Light*

The use of polarized light is confined to clear dentures where the strain patterns can be seen. Strains around porcelain teeth in a transparent denture are easily seen by this method. When plastic teeth are used, strains are very greatly reduced. This would appear to be an argument for the use of plastic teeth.

(3) *Dimensional Changes in Service*

There are several references in the dental literature^{8, 12, 15} to the fact that dentures with internal strains may change in dimensions over a considerable period of time. In the work on this subject there was no evidence that such changes do occur: on the whole, the problem is not serious because, in practice, distortion occurs rather infrequently. Although little is definitely known about this subject, it is evident that internal strains may be one of several contributing factors.

In view of the possibility that these

strains may cause distortion, it is well to guard against them where possible. One way, as Tylman and Peyton¹⁶ state, is to avoid "extreme practices in the processing technique". The elimination of extreme local concentrations of heat in the resin during polymerization can be accomplished by using the method described in this paper.

This third method of observing strains, that is, by noting any dimensional changes in the denture under service conditions, is therefore indirect. The absence of dimensional changes does not indicate a strain-free denture, but only that the strains, if present, are not serious or that the service conditions were not such as to cause the strains to be relieved.

When made by the new technique, a denture 18 months old at body temperature (99° F.) still showed excellent adaptation to its cast and to an index of the occlusal and incisal surfaces of its teeth.

(4) *Immersion in solvents*

Active strains, particularly those around porcelain teeth, are revealed by immersion in a solvent (even in ethyl alcohol, which is a poor solvent for methyl methacrylate) in the form of crazing.

In the literature there is a reference to polishing dentures by means of solvent vapours⁷. At the same time and independently the same idea was considered at the Ontario Research Foundation. However, in the few attempts which were made to polish dentures by solvent vapours, for example, with ethyl acetate, the result was always an extensive crazing of the entire denture surfaces and particularly those areas around the teeth. When plastic teeth were used, these teeth themselves were severely crazed.

Since solvents have such damaging effects on processed dentures, it is advisable to keep solvents, in any form, away from them.

STUDY OF THE POLYMERIZATION REACTION

Numerous experiments were made to

learn as much as possible about the polymerization reaction. In general, it was found that the more rapid the cure, the higher was the peak temperature. It became increasingly evident that to produce satisfactory dentures it would be necessary to control this exothermic reaction by reducing or eliminating the sudden evolution of heat.

(1) Catalysts

The rate of polymerization of methyl methacrylate is increased by heat, by light and peroxide catalysts. Conversely, the rate is reduced or polymerization even inhibited by anti-oxidants such as hydroquinone.

The use of hydroquinone to slow down the reaction by adding this compound to the monomer used in the powder-liquid mixture was investigated. It was found ineffective because although the time to reach the "kick-over" point was prolonged, the peak temperature was not reduced.

(2) Use of Metal Powder in the Investment

The thermal conductivity of the investment can be increased by incorporating in it a finely-divided metal powder such as aluminium. This will serve to conduct away the heat of polymerization more quickly than plaster alone.

These facts were confirmed by studies which indicated that when polymerization occurred the peak temperature was reduced. It was also found possible to speed up the rate of curing and reduce porosity. However, the use of aluminium powder had two disadvantages: (1) a very fine aluminium powder produced a weak investment and (2) a smooth mould could not be made when a relatively coarse (30 mesh) powder was used.

(3) Thermoducts

In some early experiments samples of denture base material were cured in a heated hydraulic press. The steel moulds were fitted with thermometer wells which were very close to the resin but no temperature increases were detected on polymerization. This showed that the polymerization could be controlled by conducting away the heat of

reaction as rapidly as it was produced.

Thermoducts had been advocated and used to some extent in the past in the tooth-half of an investment for purposes of thermal conductivity and it was decided to follow this line in developing a suitable rapid processing method. The use of only one thermoduct as suggested was found to be inadequate. An arrangement which gave very satisfactory results is shown in Fig. 4 which is a photograph of a cross-section of a dental flask with two thermoducts in the investment. It is believed that thermoducts have not been used previously in artificial stone casts to control the heat of polymerization.



FIGURE 4.

(4) Heating Cycle

In preliminary experiments it was noted that the peak temperature could be reduced somewhat by cooling the flask and the denture material just before the rapid evolution of heat took place. Additional support for the idea that a suitable cure could be worked out on this basis was found in Kelly's⁵ curing technique which involved cooling of the denture base material as one of its steps.

Results indicate that if the denture material is heated to incipient rapid polymerization, cooled and then completely polymerized, any peak temperature which may occur is not liable to cause porosity as it would normally do in a rapid curing method.

AN IMPROVED METHOD WITH THERMODUCTS

Using two thermoducts in the mould,

the following curing cycle was developed. The dental flask is immersed in water at 120° F. and is heated over a period of 15 minutes to about 170° F. The water in the heating bath is then replaced with cold tap-water and the heating continued at the same rate up to 212° F. This will require about 25 to 30 minutes. At this time the curing may be stopped and the flask allowed to bench-cool for 20 minutes. When the flask has been further cooled in cold water for about 5 minutes it may be opened and the denture completed.

Figs. 5 and 6 are presented to show the effects of the thermoducts. Figure 5 shows the thermal effects, recorded by thermocouples in clear denture base material, when only one thermoduct is used. Polymerization proceeds uniformly through the mass of the resin until at 185° F. the temperature in the

thick region of the flange increases rapidly to 237° F. This peak did not produce any porosity, but it was desired to eliminate such local thermal effects on the theory that they would cause local differences in degree of polymerization of the resin and would therefore be liable to produce undesirable internal strains.

Fig. 6 shows a similar case when an additional thermoduct is present in the artificial stone cast. In this instance, no peak occurs and all parts of the resin have cured at the same rate. In both examples, the polymerization was completed in less than one hour, effecting a considerable saving in processing time.

TRANSVERSE STRENGTH

The test for transverse strength in the Tentative American Dental Associa-

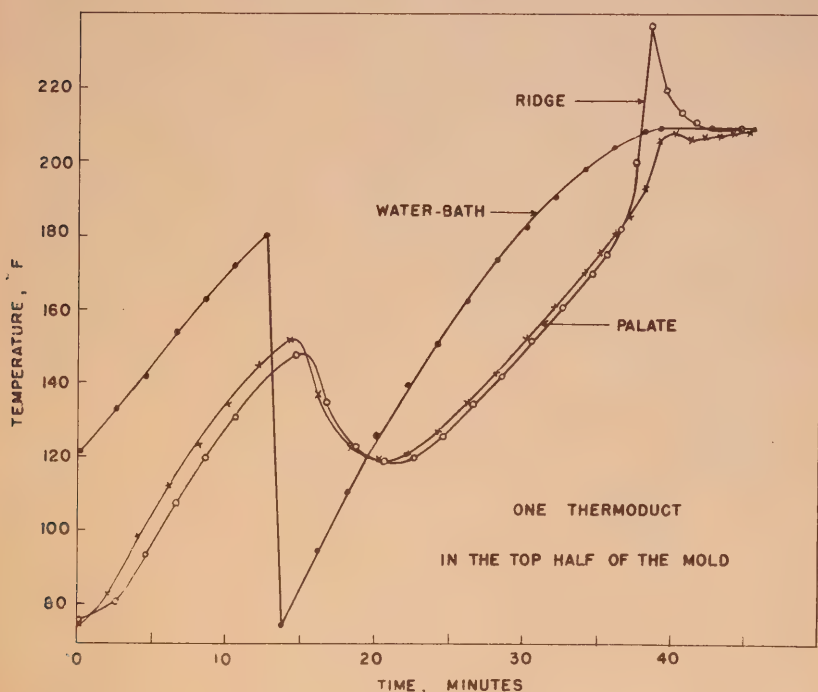


FIGURE 5.

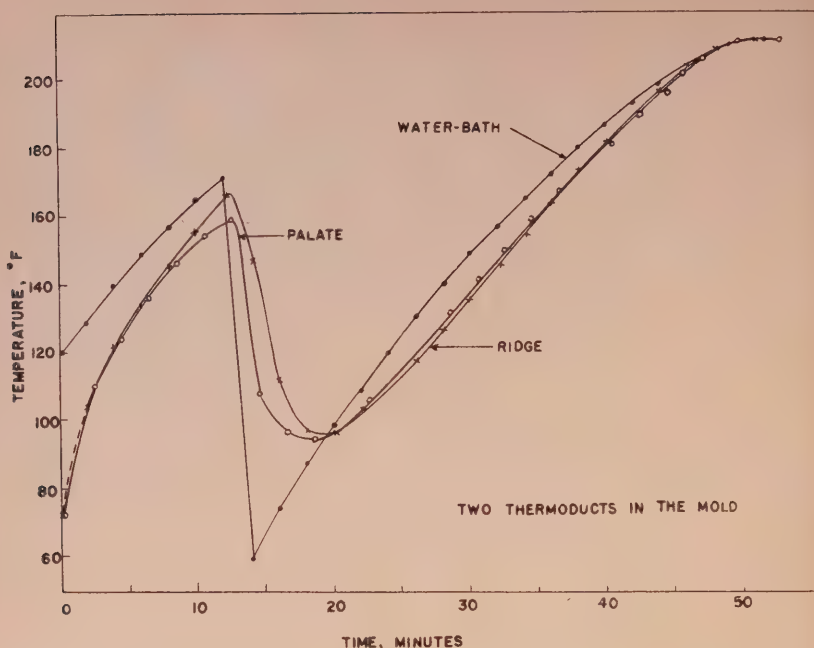


FIGURE 6.

tion Specification No. 12 was used to ascertain if the method outlined above would produce a satisfactorily cured denture base material. This test ensures that the denture is properly cured and that it is tough without being too flexible or too brittle. Since Lucitone is accepted by the A. D. A. as a satisfactory denture base material when properly used, the transverse strength test can be used to check the suitability of a particular curing method.

The specification requires that the denture base material specimens (2.50 x 10.0 x 65 mm. in dimensions) shall show a deflection of less than 2.6 mm. at a load of 4000 grams, a deflection between 3 and 8 mm. at 6000 grams and the maximum load shall be at least 6000 grams.

Table I shows the results of tests made on material cured by controlled methods.

Cure 1 is a controlled method with heating discontinued when the water-bath reached 212° F. It passes the specification limits and therefore the curing method is satisfactory. Cure 2 is also a thermally controlled technique but with the heating prolonged at 212° F. for an additional one-half hour. A comparison of these two cures shows that there is no important advantage to be gained by prolonged heating at 212° F. with the exception of a slightly higher maximum strength.

The technique used by the Canadian Dental Corps was found to be a satisfactory curing method on the basis of transverse strength but it required one hour and 45 minutes to complete and peak temperatures of well over 220° F. commonly occurred.

PRACTICAL CASES

The method using thermocouples was worked out on a research scale. All

TABLE I
Transverse Strengths by Thermally Controlled Methods

Load	Average Deflection Cure No. 1	Average Deflection Cure No. 2	A.D.A. Specification No. 12 Requirement
Grams	mm.	mm.	mm.
2000	.30	.38	Less than 2.6
3000	1.09	1.18	
4000	2.05	2.10	
5000	3.15	3.20	
6000	4.57	4.60	3.0 to 8.0
7000	7.40	6.90	
	Average Maximum Load 7000 grams	Average Maximum Load 7400 grams	
Required Maximum Load			6000 grams

dentures were made on a standard-sized cast, so that only one size of thermoduct was required for all cases. In the making of practical dentures for patients, these ideal conditions would not be present and, in addition, there would conceivably be unexpected minor difficulties to be overcome. A practical research program was therefore carried out at the University of Toronto and a number of dentures made for actual service.

Thermoducts

The necessary thermoducts for insertion in the stone casts were designed by taking measurements of a number of model casts in a collection at the Dental College of the University of Toronto. The important dimensions such as depth of vault, distance between ridges, etc. were measured and a good indication obtained of the average dimensions. With the aid of these measurements, several thermoduct models were made for both upper and lower dentures and then cast in bronze. The bases of the thermoducts were polished flat so that they would make good contact with the bottoms of the dental flasks and thus provide the maximum thermal conductivity.

Thermoducts for lower dentures should be made high enough to ensure that, when properly inserted in the denture cast and invested in the lower half of a dental flask, the land of the

investment is approximately horizontal and level with the rim of the flask. Several brass plates were designed to be attached to the bottom of the thermoducts to permit the adjustment of the thermoducts to various desired heights. In addition, some of the plates were made with their top and bottom surfaces at slight angles to each other so that the denture could be invested at an angle which would facilitate de-flasking. These details are shown in Figure 7. In practice, it was found

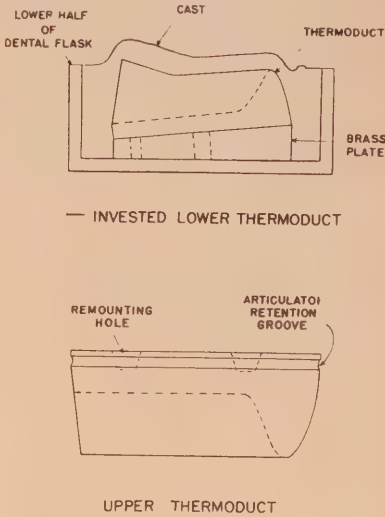


FIGURE 7.

that one plate of the correct height and/or pitch was adequate for most cases.

Fig. 7 also shows a thermoduct for an upper denture. These had to be modified by cutting a trough or undercut near the base on all sides, so that the cast and thermoduct could be mounted securely on an articulator bow by means of the plaster used for that purpose. Also, for purposes of remounting to check the articulation of the teeth of a finished denture, two holes can be counter-sunk in the bases of the thermoducts. These holes are not necessary if a different method of remounting, making use of an occlusal index, is used.

It was found that it is an easy and accurate step to position the thermoducts in the artificial stone cast if the impression was not boxed. It is common practice for many commercial dental laboratories not to box their impressions. However, in view of the fact that boxing ensures that the periphery of the impression is preserved, this safer procedure was followed in pouring the casts for the practical dentures.

Figs. 8 and 9 show respectively photographs of a lower thermoduct and a spacing plate and an upper thermoduct.

FULL DENTURES

In the limited time available, five full upper dentures and two full lowers



FIGURE 8.

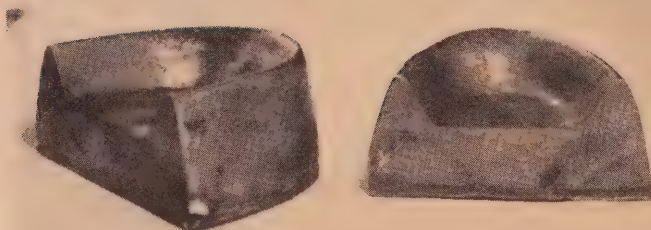


FIGURE 9.

were completed by thermally-controlled methods as well as one upper and three lowers by the method used at the Dental College of the University of Toronto. This latter method requires heating at 160° F. for one hour, then raising the temperature to 212° F. and heating at this point for an additional one-half hour. Where a complete set of dentures was being made for a patient, one was processed by a controlled method and the other by the Dental College method in order to compare the techniques and the results in each case.

It is important to use in the cast a thermoduct of the correct size and shape. When this is done, it is relatively easy to insert the thermoduct while the cast is being poured in the impression material. The remaining steps in the procedure for making a denture are then quite straightforward. The thermoducts which were used, having dimensions which were averages of those measured from specimen casts, varied sufficiently in size and shape to be entirely adequate for the dentures which were made.

It is particularly important to choose a thermoduct of the correct dimensions for a lower denture. Unless the thermoduct fits well and can be inserted in the cast so that it comes close to the bearing surface, an unusually high cast results. It may then be too large to mount accurately on an articulator. Fortunately, the design of the lower thermoducts permits the lower spacing plate to be removed to facilitate articulator mounting. This plate can be replaced when the denture is to be processed.

Photographs were made of a number of the dentures which were processed to show the shapes which were successfully handled and the texture of the finished dentures. Figures 10, 11 & 12 are photographs of dentures made by thermally controlled methods, showing the general shape of the cases.

Fig. 13 illustrates the external appearance of pink methyl methacrylate denture base material when unsatisfactorily processed. The speckled sur-

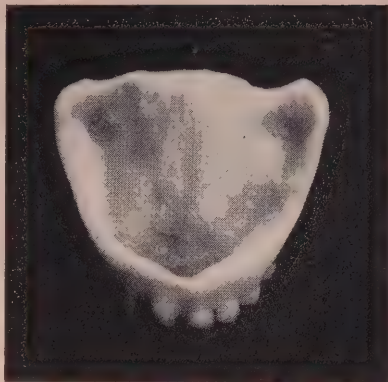


FIGURE 10.



FIGURE 11.



FIGURE 12.

face is caused by the red pigment surrounding the original polymer (powder) particles and is emphasized in these pictures because the photographic film was especially sensitive to red.



FIGURE 13.

The deep pits in the ridge of the denture and at the base of the first molar, are the severest form of porosity and were formed when this case was processed too rapidly.

PARTIAL DENTURES

In addition to the full dentures, two partial dentures were successfully made by the use of thermoplasts.

In the pouring of stone casts for partial dentures where the impressions have been taken with a hydrocolloid impression material, such as Zelex, care should be taken to see that the important features, for example, the abutment teeth and the tissue surfaces, are not distorted by the weight of the thermoplast. This can be done by pouring a small amount of stone on to these surfaces and allowing it to set before pouring the rest of the cast and inserting the thermoplast. This procedure is sound practice even when a thermoplast is not used.

A photograph of a partial lower denture which was made by a controlled technique is shown in Fig. 14.

EVALUATION OF A THERMALLY-CONTROLLED METHOD

The controlled method was compared with the technique used at the Dental College. This latter method did not make use of thermoplasts and the heating cycle required one hour at 160° F., heating to 212° F. and one-half hour at 212° F. This cure is similar to one suggested by the manufacturers of the acrylic denture base



FIGURE 14.

material, Vernitone, and graphs¹⁷ of this curing cycle show that peak temperatures are developed in the resin during the period at 160° F. and especially in thick sections which would frequently be encountered in lower dentures.

A thermally-controlled method requires a little less than one hour to complete the polymerization, thus effecting a saving of 45 minutes to one hour of processing time. It eliminates porosity by controlling the polymerization reaction, provided the prescribed heating cycle is adhered to and the flask is properly packed. It also adds a safety factor by preventing local overheating and ensuring that all parts of the denture base material polymerize at the same rate and presumably to the same degree, and, in cooling, it also prevents thermal inequalities. The thermoplasts therefore tend to minimize internal strains. As far as external appearances are concerned no difference could be detected between practical dentures made by this method and those made by the Dental College method.

It was noted that the presence of thermoplasts in the cast made deflasking very simple in that the relatively thin layer of artificial stone could be easily separated from the denture. This fact was also considered to be a distinct advantage in the use of thermoplasts. In some cases where they are not used, it is very difficult to remove the cast and considerable care

is necessary to avoid damaging the denture.

DISTORTION CAUSED BY REPAIRING

The problem of repairs requires further study because in the methods currently used some distortion usually occurs. Experience has shown that some internal strains are present in a denture no matter what method is used to process it. These strains are of no significance unless the denture is subjected to a high temperature for some time. Therefore it is best to make repairs at the lowest possible temperature. The usual method of repairing at 160° F. for several hours will cause a distortion of approximately $\frac{1}{2}$ of 1 per cent. Repairing at 212° F., will distort the denture by more than 1 per cent.

Some preliminary results have been obtained which indicate that it may be possible to make a satisfactory repair at much lower temperatures than 160° F. and avoid distortion. As before, one requisite will be that the repair material must have adequate strength. In view of the close connection of this subject with that of making dentures it is hoped to complete a study of it very shortly and report the findings in a later paper.

SUMMARY

This report summarizes recent investigations conducted at the Ontario Research Foundation on methyl methacrylate denture base materials.

Some physical properties of methyl methacrylate are described and some problems connected with the making of dentures are discussed.

A method for the rapid processing of dentures is presented. This method reduces the time necessary to cure a denture, controls the polymerization reaction by avoiding local overheating and eliminates porosity if the prescribed instructions are followed.

It was found that trial-packing cannot be eliminated conveniently, but with experience and by using the proper technique, the number of flask

closures can be reduced to a minimum.

Shrinkage is discussed and it is shown that polymerization shrinkage is counter-balanced by expansion due to water adsorption so that the difference or net linear shrinkage is unimportant from a practical viewpoint.

It is disclosed that polishing by chemical methods should be avoided as solvents for the denture base material produce serious crazing.

ACKNOWLEDGEMENT

The author is indebted to Mr. O. J. Schierholtz of the Ontario Research Foundation and Dr. R. L. Twible of the Faculty of Dentistry, University of Toronto for helpful advice and direction, and to Dean R. G. Ellis and Dr. R. J. Godfrey of the Faculty of Dentistry, University of Toronto, for providing facilities for the practical trials. The author also thanks Mr. F. T. Wood for technical assistance in making the trials and Mr. D. Riendeau and Mr. G. H. Lofts for the preparation of photographs.

REFERENCES

- (1) Atiyah, A. R. Northwestern Univ. Bull. 47, 9-15 (1947)
- (2) Hallett, G. E. M. Br. Dent. Jour. 72, 112 (1942)
- (3) Hatton, H. O. Ibid. 72, 304 (1942)
- (4) Kelly, E. B. Dental Survey 21, 48-54 (1945)
- (5) Kelly, E. B. Dental Digest 49, 102, (1943)
- (6) Kelly, E. B. Ibid. 49, 170 (1943)
- (7) Leader, S. A. Br. Dent. Jour. 79, 183 (1945)
- (8) National Bureau of Standards, Circular C433 — "Physical Properties of Dental Materials" p. 163
- (9) Osborne, J. Br. Dent. Jour. 73, 223 (1942)
- (10) Peyton, F. A. and Mann, W. R. J. A. D. A. 29, 1852-64 (1942)
- (11) Pryor, W. J. Ibid. 30, 1382-89 (1943)
- (12) Skinner, E. W. and Cooper, E. N. Ibid. 30, 1845-52 (1943)
- (13) Skinner, E. W. "The Science of Dental Materials" 3rd Ed. p. 95
- (14) Sweeney, W. T. et al. J. A. D. A. 29, 7-33 (1942)
- (15) Tylman, S. D. and Peyton, F. A. "Acrylics and Other Dental Materials" p. 124
- (16) Vernon-Benshoff Co., Pittsburgh, Veronite Work Bench Vol. 1, No. 3
- (17) Vernon-Benshoff Co., Pittsburgh, Veronite Work Bench Vol. 3, No. 11; Vol. 4, No. 2; Vol. 4, No. 8

APPENDIX A

Dimensions of Thermoducts

The thermoducts which were used in making the practical cases de-

scribed in this paper were designed from the average dimensions of a number of upper and lower denture casts. Consideration was given to the fact that some mouths are wider and also more shallow than others. The thermodonts were first modelled in wax and then artificial stone was used to make master patterns. These were sent to a foundry where the thermodonts were cast in bronze.

Upper Thermodonts

Two basic types of upper thermodonts were required. In the first, the general shape of the arch or ridge can best be described as parabolic. This type of thermodont is suited for narrow casts. The shape of the arch in the second type is elliptical and is adapted for wide casts. The other variable in upper thermodonts is the height of the ridge or the depth of the vault. In each of the two types, parabolic and elliptical, one thermodont with a deep vault and one with a more shallow vault was used.

Lower Thermodonts

Lower thermodonts are necessarily different from upper thermodonts in design. In general, they are wider and more shallow. The bases of lower thermodonts are much thinner than those of uppers and the ridge rises at the posterior or distal ends of the arch to conform to the general shape of lower casts. These details can be seen in Figure 7. The most important variable in lower thermodonts is the width. At least three sizes are required to fit the majority of cases. The floor of the vault¹ does not have to be flat but may be arched to provide greater thermal conductivity for lingual flanges which are frequently rather thick in lower dentures.

The actual dimensions of the thermodonts which were used in processing the practical cases described in this paper are given in some detail in the following table.

These figures will provide four sizes of upper thermodonts and three sizes of lower thermodonts. They will be adequate for the majority of nor-

TABLE I
Dimensions of Thermodonts in Millimetres

	Upper	Lower
Width at back.....	58	64: 70: 76
Length of base.....	51	51
Overall height at back.....	25	22
" " " front.....	25	17 ¹
Distance from back to crest of anterior ridge.....	45	45
Distance from back to base of anterior ridge = length of vault floor.....	29 and 32	35
Depth of vault = height of ridge.....	11 and 15	17 ²
Distance between ridges:		
(i) at back.....	45	51: 56: 61
(ii) at anterior of vault floor (elliptical).....	37	33: 37: 41 ³
" " " " " (parabolic).....	29	—

¹ In lower thermodonts the ridge starts to slope 15-20 mm. from the back.

² This figure applies to the height at the back of the thermodont (See also footnote 1).

³ The general shape of the arch in lower thermodonts is more or less elliptical.

1 The floor of the vault is the area enclosed by the arch. In Figure 7 it is shown by the horizontal broken line extending from the back of thermodont to the base of the ridge.

mal cases. Abnormally large or small dentures may be encountered which would require special thermoducts but they are relatively rare. The nec-

essary total number of thermoducts of all sizes would have to be determined by the number of dentures being made at any time.

ANNOUNCEMENTS

Montreal Fall Clinic

The 24th Annual Fall Clinic under the auspices of the Montreal Dental Club will be held at the Mount Royal Hotel, October 27 - 29, 1948.

Northern Ontario Dental Association

The meeting of this Association will be held in Haileybury on Saturday, September 11. Plan to be present and make this meeting the best ever.

Eastern Ontario Dental Association

The Convention of this Association will be held on September 19, 20 and 21 at the Chateau Laurier in Ottawa. Members are requested to plan to be in Ottawa on these dates.

Graduate Course in Orthodontics, Université de Montréal

The graduate course in Orthodontics, of one year duration, will begin on September 8, 1948.

As the number of candidates is limited to 15, the applications should be sent in as soon as possible. This one-year course is given in the English language.

Any information regarding this course and all applications should be made to:

DOCTOR PAUL GEOFFRION,
Vice-Dean and Head of the Orthodontic Department,
Université de Montréal,
2900 Mount-Royal Boulevard, Montreal 26, Que.

Course in Pedodontics

A graduate course in Pedodontics designed to meet the needs of practitioners who wish to specialize in the practice of dentistry for children will be offered next fall by the University of Illinois College of Dentistry.

The course will start on September 13, and will continue for nine months on a full-time basis. Dentists who are eligible for a master of science degree in Pedodontics will be required to complete a research project.

One comfort is that great men taken up in any way are profitable company. We can not look, however imperfectly, upon a great man without gaining something by it. He is the living fountain of life, which it is pleasant to be near. On any terms whatsoever you will not grudge to wander in his neighbourhood for a while.—Carlyle.

PRESENT STATUS OF THE DENTAL HYGIENE PROGRAM*

by HOWARD M. MARJERISON, D.M.D., Associate Dental Infirmary for Children

I KNOW of no more fitting place to discuss the question of the present status of the dental hygiene program than in the State of Connecticut, where through the vision of Doctor Fones it was conceived and nurtured some thirty-five years ago. Through the intervening years it has grown steadily until it is now recognized in thirty-seven states with sixteen schools offering courses in dental hygiene. In short, the dental hygiene program has definitely established itself as an important branch of dentistry, and as such, it assumes its position as one of the component parts of the broad field of health service. It appears, however, that the time has now arrived when important decisions must be made concerning the development of the hygiene program in the future.

During the past year, the Council on Dental Education set up educational standards on the basis of which all training schools will be accredited in the future. In another direction, there is growing agitation to increase the scope of the dental hygienist's service.

Of particular and immediate concern to the authorities at the Forsyth, however, is the stipulation, as set forth by the Council on Dental Education, that two years shall be the minimum course of training. For reasons which I shall presently point out, our staff and Board of Trustees seriously question the wisdom of forcing the issue on this point at the present time.

On the basis of thirty-two years' experience in training dental hygienists at the Forsyth, our Board is not convinced that we can justify the increase in the time of training within the present limitations of practice established by law. These limitations place restrictions on the content of the course with

the result that the curriculum outlined for the two-year course by the Council on Dental Education offers no fundamental change from a one-year program except to increase the time devoted to the same subjects.

In short, measured in terms of service to the public and economy of effort, we believe that adding another year to the curriculum without broadening the scope of the service which the hygienist can legally render is placing the cart before the horse. This opinion is not based on stubborn resistance to change but on the evidence of cold facts. By the turn of a hand we would introduce a two-year program at the Forsyth. That is not the point. The question is—Is it in the best interest of the public, of the dental hygiene program and of the dental profession?

Paradoxical as it may seem, some of the strongest evidence in support of our contention has been compiled in a bulletin published by the Council on Dental Education under the title "Dental Students' Register, 1946." In this bulletin the following table of statistics on the status of the dental hygiene schools in 1946 is especially pertinent to the subject under discussion.

An analysis of the foregoing data discloses that in 1946:

1. Ten schools out of a total of 16 were operating on a two-year program and that the total number of graduates from the sixteen schools was 420.
2. A break-down of the figures indicates that the average number of graduates from the two-year schools was 13.6 as compared with 48.4 from the one-year schools.

In other words, the six one-year schools graduated $3\frac{1}{2}$ times as many hygienists as the ten two-year schools.

* Presented before the Connecticut Dental Hygienists' Association, June 5, 1947.

**American Dental Association, Council on Dental Education
Dental Students' Register, 1946**

Schools of Dental Hygiene

Title of School or Course	Institution with which connected	Admission Requirement	Length of Course	Enrollment 10-15-46	Graduates year ending 6-30-46	Degree or Certificate
Curriculum for Training of Den- tal Hygienists	Coll. of Dentistry U. of California San Francisco	2 years in Liberal Arts	2 years	10	2	B.S. in Dental Hygiene
Division of Den- tal Hygiene	Coll. of Dent., U. S. Calif., Los Angeles	High School Cse. or 2 yrs. in Liberal Arts	2 years	44	17	Certif. (GDH) or B.S. in Dental Hygiene
Course for Dental Hygienists	Coll. of Dentistry, Howard U., Wash., D.C.	High School Course	1 year	10	9	Certificate
Course for Dent. Hygienists and D. Assistants	Dental Sch., North- western U., Chicago	High School Course	2 years	51	16	Diploma
Curriculum in Dental Hygiene	Sch. of Dent., U. of Mich., Ann Arbor	High School Course	2 years	51	17	Certificate
Course for Dental Hygienists	Sch. of Dent., U. of Minn., Minneapolis	High School Course	2 years	84	29	Graduate Dental Hy- gienist (GDH)
Courses for Den- tal Hygienists	Sch. of Dental & Oral Surg., Columbia U.	High School Course	1 year	28	41	Certificate
Course in Dental Hygiene	Coll. of Dent., Ohio State U., Columbus	High School Course	2 years 4 years	50	17	Grad. Den. Hyg. or B.A. W. Cert.
Courses for Dent. Assts. & D. Hygs.	Dent. Sch., U. of Oregon, Portland	High School Course	2 years	16	11	Certificate
School of Oral Hygiene	Sch. of Dent., Temple U., Phila.	High School Course	1 year 4 years	42	31	Cert. in Oral Hy or B.S. in Ed.
Courses in Oral Hygiene	Sch. of Dent., U. of Penna., Phila.	High School Course	1 year 4 years	67	55	Cert. or B.S. in Education
Cse in Dent. Hyg. includ. cses. in Dent. Assisting	Meharry Med. Coll. Nashville, Tenn.	High School Course	2 years	17	3	Diploma
Curriculum for Dental Hygienists	Dent. Sch., Marquette U., Milwaukee	High School Course	2 years 4 years	66	12	Dipl. or B.- S. in Pub. Health D.H.
Forsyth Sch. for Dental Hygienists	Forsyth Dental Inf. Boston	High School Course	1 year	70	70	Diploma
Sch. for Dental Hygienists	Eastman Dental Disp. Rochester, N.Y.	High School Course	1 year	81	78	Certificate
Dept. of Dental Hygiene	West Liberty State Coll., W. Va.	High School Course	2 years 4 years	42	12	Cert. or B.- S. in Den- tal Hygiene
TOTAL				729	420	

Moreover, the largest class from the two-year schools was composed of 29 graduates as compared with 78 graduates from the one-year schools, a ratio of two to one in favour of the one-year schools. In view of the apparent need for more auxiliary personnel in dentistry, can we afford to ignore these figures in relation to the question of doubling the time and cost of training a dental hygienist?

In June, 1947, the Forsyth School for Dental hygienists graduated a class of 68 dental hygienists, with 195 positions available to them, or practically three positions for every graduate. On the basis of this evidence, it does not seem unreasonable to venture the prediction that requiring the six schools now operating on a one-year basis to adopt a two-year program will markedly reduce the number of applicants to the field of dental hygiene. As far as Forsyth is concerned, a two-year program would reduce the number of graduates by one-half because of the limitations of facilities.

But the loss of numbers is not all. Of far greater consequence is the possible effect on the quality of applicants selected for admission to the field of dental hygiene. At the Forsyth, for example, we received 178 applications for admission to the 1947-48 class. The maximum number of students we can enroll is 70. Of the 70 selected, 45 have had additional education beyond the minimum entrance requirements (a college course in high school is required). Twenty-nine have had experience in dental offices or clinics, and the over-all scholastic average of the group is 85%.

On the basis of these facts, is it any wonder that we should question the wisdom of doubling the time and cost of training dental hygienists? By so doing, we not only run the risk of reducing the number entering the field, but at the same time sacrifice the selective values inherent in large numbers.

In the final analysis, the whole argument hinges on the important question

—What are we training dental hygienists for? In answer to this question two important factors must be considered: first, that the time devoted to training in the various areas of health service depends on the aims, objectives, and scope of that service; and second, that the primary purpose underlying the development of a large segment of health workers is that they shall be trained as economically as possible to act as assistants to more highly-trained personnel in order to extend health services to more people.

If, on the one hand, the objective of the dental hygiene program is to train the hygienist to teach in public schools or to function as a public health worker, we believe in, and have long advocated at the Forsyth, a broad liberal arts education as a background in order to qualify the dental hygienist to take her place on an intellectual level with other teachers and public health personnel. If, on the other hand, the educational objective is to train dental hygienists to serve as auxiliary aids to dentists in private offices, hospitals, clinics, or schools, we believe that the evidence we have presented convincingly demonstrates that, under the present limitations of practice established by law, this objective can be accomplished most successfully and economically in one year. In this connection it is significant to note that of the 195 positions available to Forsyth graduates this year, the overwhelming majority (188) were in the offices of private practitioners.

In conclusion, I wish to say that as a representative of an institution which pioneered in the development of a training school for dental hygienists, we are desirous of fostering the highest possible educational standards but not by losing sight of the main purpose for which we are training the dental hygienist or at the expense of destroying many of the gains which have been made during the last thirty-five years. We should at all costs avoid the possibility of educating the dental hygienist out of existence.

The Forum

EFFECT OF ZINC OXYPHOSPHATE CEMENT ON ENAMEL

by I. CASTELLO, D.D.S., MAURY MASSLER, M.S., D.D.S., U. L. MONTELEONE, D.M.D., and
T. SUHER, D.M.D., Chicago, Ill.

Conclusions of paper in Am. Jour. of Ortho., March, 1948

This report deals with the effect of zinc oxyphosphate cement on enamel surfaces.

A series of thirty-six recently extracted teeth were used. The effects of cement on ground and unground enamel surfaces were studied.

1. Cement liquid alone etched the enamel markedly and homogeneously.

2. All enamel surfaces exposed to the action of various mixes of cement were more or less affected.

3. The etching was more prominent

on the ground surface than on the unground surface. This might indicate the presence of a "protective film" on the surface of the intact enamel.

4. The etching was spotty or circumscribed, indicating a partial adherence of cement to enamel surface.

5. The degree of etching did not seem to increase after the cement was completely set.

6. The cement liquid alone and the cement mixes did not affect the enamel surfaces covered by a film of collodion.

PREVENTION OF DRY SOCKETS

by HAROLD W. KROGH, D.D.S.

From the Department of Surgery, George Washington University
Medical School, Washington, D.C.

Conclusion of paper in Jour. of D. Research, Feb., 1948

The experience gained in removing 773 lower molars and premolars during 1944 has been compared to that of removing 2,126 morphologically similar teeth over a period of six years, reported in 1937. The only difference in technique, except the change in procaine hydrochloride used, is that sulphonomide tablets were placed in the sockets of extracted lower molars and premolars in the 1944 series. The results are highly favourable to the employment of sulphonamides in such procedures.

No typical dry socket developed in sixty-six sockets of unerupted teeth, as compared to sixty-two (27.6 per cent) in 225 unerupted teeth in the control series. The chances of such a difference occurring as a result of a random selection is about 1 in 5 million.

No dry sockets developed in 707 sockets of erupted teeth, as compared to 68 (3.1 per cent) in 1901 erupted teeth in the control series. The chances of such a difference occurring as a result of random selection is about 1 in 100 million.

A CLINICAL STUDY OF THE TREATMENT OF ROOT CANAL AND PERIAPICAL INFECTIONS WITH PENICILLIN

by FLOYD D. OSTRANDER, D.D.S., M.S., MARY C. CROWLEY, M.S.P.H.,
and JOHN DOWSON, D.D.S., M.S.

University of Michigan, School of Dentistry, Ann Arbor, Mich.

Conclusions of paper in Jour. of D. Research, Dec., 1947

Since the laboratory phase of this study has shown a high incidence of penicillin-resistant organisms to be found in root canal and periapical infections and since clinical results have closely paralleled the laboratory findings, it is concluded that penicillin is not a satisfactory drug for the treatment of such infections. It is obvious

that the practising dentist will have neither the time nor the equipment to determine penicillin-sensitivity and when resistant organisms are encouraged much valuable time will be lost if penicillin is used routinely. However, further studies of the newer antibiotics and of possible combinations of penicillin with them, would seem indicated.

PENICILLIN SENSITIVITY OF STREPTOCOCCI ISOLATED FROM ROOT CANAL INFECTIONS AND THE NORMAL MOUTH

by MARY C. CROWLEY, M.S.P.H., and VERA HARNER, B.S.
School of Dentistry, University of Michigan, Ann Arbor, Mich.

Conclusions of paper in Jour. of D. Research, Dec., 1947

From these experiments it may be concluded that *Streptococcus viridans* from root canals is sensitive to penicillin. Anhemolytic and hemolytic streptococci from root canals are resistant to penicillin.

The necessity of testing various strains to determine penicillin sensitivity is obvious.

Streptococcus viridans from infected root canals and saliva seem to be similar in relation to penicillin sensitivity.

The anhemolytic streptococci and hemolytic streptococci from infected root canals, and those from saliva are markedly different in their reactions

to penicillin. However, further study is definitely recommended.

These differences may serve as a method, or at least give a clue to a method, for classifying the anhemolytic group of streptococci. Bornstein used penicillin sensitivity to classify some types of streptococci. He reported "the method checks well with differentiations which have been made on a basis of physiological studies."

The results of these experiments lead one to doubt that the anhemolytic and hemolytic streptococci from infected root canals are the same as those found predominating in the mouth.

ADVANCES IN GENERAL ANAESTHESIA: PENTOTHAL SODIUM AND CURARE

by PHILIP E. SCHULTZ, M.D., and WALTER C. GURALNICK, D.M.D., Boston

Conclusions of paper in Jour. of A.D.A., Feb., 1948

A variety of agents and techniques is available for the production of anaesthesia in oral surgery. Although all of them are satisfactory when administered by competent, experienced anaesthetists, none is ideal. A knowledge of physiology and pharmacology is

necessary for the safe administration of these potent drugs.

Nitrous oxide and ether still hold their leading places among anaesthetic agents, but their use has been improved by premedication and the endotracheal method of administration.

Vinethene and pentothal sodium are becoming increasingly popular. Vinethene can well be utilized in office procedures but is contraindicated in the longer, complicated cases.

We have paid particular attention to pentothal sodium because we feel that it approaches the ideal of anaesthesia for oral surgery. The following points are to be stressed:

1. Pentothal sodium is recommended for procedures lasting longer than ten minutes.

2. Premedication with atropine is a must.

3. Fractional administration of a 2½ per cent solution of pentothal is advocated.

4. Nitrous oxide and oxygen are combined with pentothal sodium, and the two agents have a truly synergistic action.

5. Local infiltration is also advised whenever possible.

6. Careful attention to packing of the mouth and the use of continuous suction during the entire operation are stressed.

7. For hospital cases a double catheter technique is used, and the placing

of the patient in a 5 degree Trendelenburg position is urged.

8. The addition of curare to the pentothal-gas-oxygen combination provides a method for handling the more complicated maxillofacial cases in which maximum relaxation and intubation are essential during maintenance of a light plane of anaesthesia.

Pentothal sodium, when handled intelligently, provides safe anaesthesia with pleasant and rapid induction and smooth maintenance. Patients have little post-operative discomfort, and the recovery period is not much longer than that after equally long operations under nitrous oxide-oxygen anaesthesia.

In the final analysis, it should be remembered that an anaesthetic must be chosen for a particular patient and a particular surgical procedure. The choice of anaesthetic should not be governed by the whim of a patient or operator but should be made on the basis of the studied opinions of the anaesthetist and surgeon. Once the decision regarding the anaesthetic agent has been made, the patient will receive the optimum benefit if surgeon, anaesthetist and assistant work as a team to produce comfort and safety for the patient and the most efficient operation.

TREATMENT OF PERIAPICAL LESIONS

Summary of Paper in Tandlaegebladet, Dec., 1947

After a brief mention of penicillin and its use in dental therapeutics a description is given of the methods and results of a combined penicillin and sulphonamide treatment of acute and chronic apical periodontitis in children of ages between about 9 and 15 years.

This treatment has been given in the Dental Clinics of the Copenhagen Municipal Schools in about 30 instances. After a cleaning by mechanical means of the root passages and the cavity through the apex the operative zone is rinsed with distilled water and a freshly prepared solution of penicillin containing about 10,000 international units is injected into the focus through the

root canal. Until the next visit paper-point soaked in penicillin solution is placed in the root canal and the cavity is closed with a temporary filling. This treatment is repeated after 24 hours or less, and after another 24 hours the root is filled after rinsing of the root passage with chloramine and washing through the focus with a solution of sulpha-diazole and the pumping of bisulphane powder into the periapical area.

As a general rule acute cases will be free from symptoms after the first treatment. By x-ray control effective healing is observed within 3 to 9 months.

QUERY AND ANSWER*Reprinted from Jour. of Oral Surgery*

Query: In making injections around a tooth may one use the same needle for two insertions or should a fresh needle be used for each insertion?—B. T.

Answer: Intra-oral use of local anesthetic agents presents problems ordinarily not encountered elsewhere. The preparation of the oral field, prior to needle insertion, cannot promise as much in the prevention of contamination of the needle as can sterilization of the skin. Nevertheless, the goal should be sterile needles and a field as sterile as can be achieved. If

the field is dry and clean it would seem that there is no absolute need to change needles if infiltration is carried out in the anterior part of the mouth and if acute infection is absent. However, if any deep injection is to be made, such as that for inferior alveolar nerve block at the mandibular foramen, it would be well to employ a fresh sterile needle and insert it into a spot which has been thoroughly cleaned, dried and freed from saliva. Despite the greatest care, organisms are sometimes carried into the tissues by the needles.

PATIENT RESPONSE TO FREE DENTAL CARE

Report of an Exploratory Dental Program in Two High Schools of New York City, October, 1946 to May, 1947.

by HARRY STRUSSER, D.D.S., M.S.P.H. and HENRY C. SANDLER, D.M.D., M.P.H., Bureau of Dentistry, Department of Health, New York City.

Summary of Paper in N.Y. Jour. of D., March, 1948.

1. The response of high school boys to referral to a dentist varies considerably between schools. The efforts and enthusiasm of the dental hygienist and school health counsellor seem to be important factors in stimulating boys to visit a dentist.

2. Twenty-four per cent of the boys in these schools could not afford to pay for private dental care and requested free dental treatment.

3. Despite the fact that free dental care was easily obtainable and that continuous follow-up made the needs clear to the boys, 37 per cent did not visit a private dentist or a part-pay clinic and did not take advantage of free dental treatment. This seems to indicate that a large proportion of boys of high school age are not fully aware of the importance of dental health and of the necessity for dental treatment.

4. The free dental treatment provided by the Department of Health

improved the dental health of the boys treated. The necessity for continuous dental care is demonstrated by the fact that within seven months some caries was found in 47 per cent of the boys who had been completed.

5. It is the consensus of teachers that free dental treatment is of great value in stimulating all students to seek dental care. While these data offer no conclusive statistical evidence to this effect, it would seem that free dental services should be provided for any child who cannot afford to pay for private care.

6. The "Completion" note from a private dentist is an effective instrument in the attainment of dental health. The value of the dental note rests almost entirely on the return of the "completion" portion. A note indicating that a child is "under treatment" does not have much significance. It is emphasized, therefore, that follow-up must continue until dental treatment is completed.

FLUOROSIS AND NUTRITION IN MOROCCO

Dental Studies in Relation to Environment

by MARGARET M. MURRAY, D.Sc. Lond. and
DAGMAR C. WILSON, M.D., Glas., M.R.C.P., F.R.C.O.G., D.P.H.

Summary of paper in Br. D. Jour., March 5, 1948.

A comparison is made of the condition of the teeth in two groups of twenty-five school children respectively European and Arab, who have always used the same water in the Khouribya phosphate mining settlement of French Morocco, an area of endemic fluorosis. The effects of the fluorine intake upon the dental structure were much less marked among the European children who received a relatively good diet than among the

Arab children who showed signs of malnutrition. Observations in Italy have confirmed this conclusion in showing that the effects of high fluorine intake are mitigated by the consumption of a good diet.

The suggestion is made that in surveys and investigations on the influence of dietary factors on tooth development, the intake of both fluorine and iodine in the diet and water supply should be considered.

APPLIED PATIENT EDUCATION IN THE DENTAL OFFICE

by MARTHA G. ROSS, R.D.H., Associated with C. L. KENNEDY, D.D.S., Montgomery, Virginia

Condensed from West Virginia Dental Journal, April, 1948.

The value of educational material in the dental office cannot be overestimated. One prominent dentist remarked that if every practising dentist in the state would restrict the reading material in his waiting room to dental and general health literature, alone, the increase of such knowledge among patients would not only be enormous, but would also be reflected in greatly improved dental and general health.

In our office we have replaced so-called popular magazines with pamphlets and books which explain dental procedures and which present to the reader ways to improve both dental and general health.

An index file listing each pamphlet in use at the office will help in keeping adequate supplies on hand at all times. A monthly inventory should be made or some system be set up for a periodic purchase of depleted supplies. I also suggest a pamphlet rack in the waiting room so that everyone may have easy access to the subject of his choice.

For the children, we have supplied graded reading materials and various souvenirs to be presented at the com-

pletion of each visit. These include book markers, metal pins with slogans such as "My teeth are O.K., are yours" and "Pinochio" certificates stating that the child's teeth are in good condition. Dental health charts to be coloured at home also provide an entertaining method of dental education.

We find it helpful, also, to place in the hands of most extraction patients a copy of an excellent pamphlet, "Your Teeth and Your Life." This stresses regular dental care and the importance of replacing missing teeth. For the patients undergoing complete dental treatment, copies of nearly all the materials are made available in the waiting and retiring rooms. Thus, when a patient asks why his teeth have been x-rayed, we have not only a verbal explanation to give him but also a booklet dealing with the subject as well. The same procedure is followed concerning questions about children's dentistry, operative procedures, diet, and tooth-brushing technique. Leaflets pertaining to these subjects are sometimes slipped in with monthly statements.

A bulletin board at the entrance to

the waiting room also provides valuable space for patient education. Posters, cartoons, charts, illustrated magazine articles, and similar items are placed there. The receptionist has noted that the great majority of incoming patients examine at least one of the displayed materials. This fact alone attests to the value of an educational device of this type.

A regular part of each new patient's treatment being a tooth-brushing demonstration, we find this time to be of special value in personal education. Each new patient receives a tooth brush to use at home, to accompany his newly acquired brushing technique. Some pa-

tients show keen interest in this and are most cooperative in mastering a correct method of home care.

By way of summary, I would like to suggest, then, that the following procedures be used in setting up and maintaining a worth-while educational program. First, obtain a quantity of useful educational materials; then distribute them regularly and in a variety of ways in order to place continual emphasis on the importance of dental care. Effective educational procedures will contribute inestimably to increased knowledge of the value of dental care and to patient cooperation in improving dental health.

SUGGESTIONS LEADING TO A BETTER PROFESSIONAL RELATIONSHIP BETWEEN THE GENERAL PRACTITIONER AND THE ORTHODONTIST

by HENRY E. COLBY, D.D.S., Minneapolis, Minn.

Conclusions of paper in Minneapolis District Dental Journal, March 1948.

First, there is no "golden age" for instituting orthodontic treatment. Second, a complete, readable, and detailed roentgenographic survey of each patient is indispensable. Third, in operative procedures the family dentist's judgment should be final. Fourth, the general practitioner should be careful never to give casual and off-hand advice to parents concerning the dental health of their children. Fifth, the orthodontist and the family dentist each has a definite individual responsibility to the patient. And lastly, there is nothing more gratifying, nothing that fills the orthodontist's heart with

a warmer glow of satisfaction than to see a patient whose dental and facial deformity has been changed to present a beautiful, normal dentition in a face that is pleasing in all proportions as nature intended, not a temporary improvement, but one that will bring happiness and comfort to the patient and his parents for years to come. Certainly all of you dentists in general practice must experience this same thrill. It is in the hope of bringing about even more beneficial improvements for these people, and to provide this highly satisfactory professional service to a greater number of your patients, that the above suggestions have been made.

INFLUENCE OF RECENT RESEARCH ON PRESENT AETIOLOGIC CONCEPT OF MALOCCLUSION

by LEIGH C. FAIRBANK, D.D.S., Sc.D., Washington, D.C.

Recent research has had a most favourable influence on the concept of the causes of malocclusion. In fact, the present concept assures a more adequate understanding of orthodontic problems and gives the orthodontist a more positive approach to case analysis

and treatment planning. The most noteworthy results of recent research concerning the structures of the face and jaws may be summarized as follows:

Interstitial bone growth does not exist. Growth of cartilage in the man-

dibular condyle does occur by interstitial proliferation and by apposition from the deepest layers of the covering fibrous tissue.

At no time in the life of a person do heredity and environment operate alone.

All the inherent factors and environmental influences must be maintained in perfect and normal balance for the normal development of occlusion.

Growth of bone in the maxillae and mandible is one of the forces of eruption.

The present concept discards Angle's postulate concerning the integrity of

the thirty-two teeth in many cases of malocclusion.

No growth takes place in the body of the mandible anterior to the first molars after their eruption.

All bone growth occurs by surface addition. Orthodontic treatment will not stimulate bone growth.

Stability of the dentition is dependent on correct positioning of the teeth over foundation bone.

Permanent and lasting results in establishing aesthetic and functional occlusion depend on the structural limitations of inheritance, environment and functional adaptation.

FULL DENTURES

by ELLIOT HECHTMAN, D.D.S.

From New York Journal of Dentistry

Full dentures were discussed at the February meeting of the Bronx County Dental Society by Dr. Joseph S. Landa. Making a plea for better integration of basic sciences with clinical practice, particularly in prosthetics, Landa pointed out that when fundamental principles are understood we can put in their proper place the innumerable techniques and "gadgets" which are often paraded as panaceas.

Biological factors play an important part in success or failure of dentures, and present knowledge is by no means complete in this area of dental treatment. An incorrect calcium balance or an unfavourable saliva may underlie persistent discomfort with dentures which seem perfect mechanically. Muscular tension, in patients who were accustomed to biting food with very heavy pressure, or who constantly clamp down upon their dentures through much of their waking day, can cause continued tissue irritation.

Psychological factors should also be recognized as playing a part in the construction of dentures. Too often patients having dentures made have

an incorrect "psychic representation" of artificial teeth in mind, and are disappointed when the reality fails to measure up to preconceived ideas. Those who think of dentures in terms of chewing nails or eating tough steak should be educated to the limitations of artificial substitutes.

A deep V-shaped vault, Landa went on, is unfavourable because there is less horizontal bearing surface. With a very flat vault great care should be used in determining centric relation, since the tendency to slipping of base plates is not sufficiently resisted.

In trouble-shooting cases in which the lower denture rises to a floating position, one should consider the possibility that the lower lip may be pressing against the labial surfaces of the anterior teeth, which are often set too far forward from the ridge. In this connection, the proper relation between upper and lower anteriors permits sufficient horizontal overbite; contact of the lower labial surface with the upper lingual surface should be avoided.

A great majority of dentures do not have simultaneous contact of the

teeth, which should be present in all cases as the mouth closes in centric occlusion. The dentures should not be inserted as they come from the processing, since there is inevitably

some shifting. Instead, they should be mounted to a new bite and the occlusion adjusted—a procedure which takes little time but improves the case greatly.

A SURVEY OF THE DENTAL CONDITION OF CHILDREN IN DAY AND RESIDENTIAL WARTIME NURSERIES

Summary of paper in Br. D. Jour., March 19, 1948

(1) A survey of the dental condition of children in war-time nurseries shows that residential nursery children have better teeth than have day nursery children.

(2) Both nursery groups have the same basic diet with additional vitamins but in institutions the diet is controlled and among day nursery children who live at home it cannot be controlled.

(3) Among residential nursery children the incidence of caries decreases as the stay in the nursery increases, but among day nursery children prolonged stay does not appear to reduce the caries incidence except when oral

hygiene reaches a high standard.

(4) The percentage frequency of caries in various surfaces of individual teeth is demonstrated.

(5) Caries incidence varies in proportion to the type of tooth structure, "gross" hypoplasia and gum condition, anterior teeth of poor structure being highly susceptible to caries.

(6) There is an indication that caries incidence is greater among day nursery children living in poor environment than among those of good home circumstances.

(7) Day nursery children who were breast-fed for six months or more have a higher caries incidence than those who were artificially fed.





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Editorials

THE DENTAL HYGIENIST

For many years the average dentist practised by himself. Later he began to employ assistants, usually men, to assist with the mechanical side of dentistry. Following this the lady dental assistant became a necessity. As early as 1906 a woman in the U.S.A., without a degree in dentistry, was permitted to clean and polish teeth. In 1913 a training course for such women was opened in Bridgeport, Connecticut, and in 1915 Connecticut became the first state to pass a law permitting the issuance of a licence to practise dental hygiene. Last year there were 16 schools providing training for dental hygienists in the U.S.A. and 37 states had passed laws regulating their practice.

As the hygiene profession developed educational work was included and hygienists began to give instruction, especially to children, in the care of the teeth. They now constitute an established profession in the U.S.A. and they are about to become established in Canada as several provinces have passed laws permitting the Dental Board to make provision for their training and practice.

The problem of training these young women in sufficient numbers to meet the need of modern dental practice taxes the imagination of the entire profession. The status of dentistry today is such that a man cannot practise efficiently and economically without auxiliary help such as an assistant, a hygienist and a technician. The training of all of these groups has been largely side-stepped by the Canadian dental profession. True it is that a

one year course is given at the Faculty of Dentistry, University of Toronto, for dental assistants, but these graduates can supply a mere fraction of the need, and most dentists throughout Canada employ an untrained assistant and teach her what they wish her to undertake.

Now it is suggested that the Canadian Dental Association approve of a two year college course for dental hygienists which raises many serious problems. I am aware that the Council on Dental Education of the American Dental Association has voted to increase the length of the course for dental hygienists from one to two years. This is no doubt advisable if the hygienist is going to enter the public health field where she will compete with teachers and health workers who have college degrees, but might it not be better still to insist that such positions be filled by those who have had a broad liberal arts education with a college degree in hygiene in order to qualify the dental hygienist to take her place on an intellectual level with other teachers and public health personnel as advocated in the fine paper by Doctor Howard M. Marjerison appearing in this issue of the *Journal*.

But the question is as to whether or not a two year course following a four year high school course is necessary for a girl to give prophylaxis in a dental office, instruct patients in daily mouth care, give dietetic advice, especially to children, give information concerning various phases of hygiene and dental education, such as the prevention of pernicious habits in children, necessity for regular examination of the mouth, x-ray work, etc.

A hygienist should not leave a patient while giving prophylaxis to answer the telephone, receive patients, make appointments, accept payments on account, assist the dentist at the chair and so on, any more than the dentist himself should leave a patient to look after such details. The dentist requires first a dental assistant and in the earlier days of practice will no doubt give prophylaxis to his patients himself. As his practice increases he should be able to employ a hygienist as well as an assistant. When the hygienist is not operating no doubt she would help with x-ray work, and many other duties connected with dental practice, but if she were taught none of these duties other than prophylaxis during her college course, she would be no worse off than nearly all assistants are at present who accept a position in a dental office.

In a letter received recently from the supervisor of the Courses in Oral Hygiene at the School of Dentistry, University of Pennsylvania, the following is stated: "We offer a one year course leading to a Certificate of Proficiency in Oral Hygiene, and another course that is of four years duration. This leads to a degree in education and the Certificate as well. The B.S. degree is given by the School of Education within this University. It is a combined course and was planned for the dental hygienist who wishes to go into teaching or feels that she has further need for education beyond the one year.

"I hope sincerely that this will be left as it is. There are some who

advocate a two year course for dental hygienists and their reason is that she will have more prestige. I must say I think this is very unwise. If a dental hygienist wishes to teach or wishes to go into some sort of public health work, the degree is necessary. The two year course is not given much recognition in work of this type.

"For the girl who plans to assist the dentist in his office or his clinics, the one year is adequate. I have asked the advice of many state board examiners and they tell me that they see no difference in the one year graduate or the two year. More depends upon her interest and enthusiasm than it does upon the length of her training course. I fear that the dental hygienist who is required to have too long a course in a college is not the type of young woman who will be willing to be a dental assistant."

Dean Appleton of this same institution says: "For 25 years we have been training dental hygienists and they have earned the respect and gratitude of hundreds of private practitioners who have employed them and I strongly protest against making a two year course compulsory, as being educationally unnecessary and socially inadvisable, an opinion which is shared by many dentists who are universally respected by the profession and whose devotion to the cause of oral health cannot be doubted. Doubling the training period of the hygienist will double the cost of that training, which will have to be met by the family of the girl and/or society. Doubling the cost will interpose an insuperable economic barrier to many girls who otherwise would make excellent hygienists."

We don't want half-trained dentists with a false sense of knowledge and ability. We don't want training made so costly that the graduate will require a salary beyond the possibility of the average dentist to meet. We should avoid the possibility at all costs of educating the dental hygienist out of existence. We do require auxiliary helpers who can give prophylaxis, but who are not above dusting the office and assisting in any way possible.

I would like to see the dentists who are already practising do so as efficiently as possible and reach the highest pinnacle of success. Every effort should be made to conserve professional time. This can only be achieved by employing adequate auxiliary help and this help should be made available at the lowest cost to the dentist consistent with the time and money expended by the auxiliary helper in securing the necessary education. This is a time for wise statesmanship upon the part of those who are directing the practice of dentistry in Canada today.

M. H. G.

IN UNITY THERE IS STRENGTH

At the time of writing the result of the fourth plebiscite held by the British Medical Association on the question of accepting service or not accepting service under the new National Health Service Act is not known. However, regardless of how the vote goes one thing stands out clearly and that is the dramatic demonstration of unity when the original government

proposal proved non-acceptable resulting in an overwhelming vote of no confidence in the National Health Service Act in the form in which it was before the profession last January. As a result the Government was persuaded to modify the Act already on the Statute Book, a most unusual condition.

It is as the editor of the British Medical Journal states:—"At all costs we must strive to preserve our unity and agree to differ, if differ we must, in a spirit of tolerance. The forces that bind medical men together are much stronger than those that tend to separate them. What matters to the medical man working in this service is his freedom to apply the art and science of Medicine according to his training and his conscience, and his freedom to express his opinion by voice and pen in all aspects of professional life, including the administration of the service in which he works."

What is true of Medicine in this regard is also true of Dentistry. In unity there is strength.

M. H. G.

CANADIAN DENTAL ASSOCIATION NEWS

(FROM THE OFFICE OF THE SECRETARY)

Income Tax — Members on Salary

A communication has been now received from the Minister of National Revenue stating "The annual licence fees paid by members of the Dental Profession, employed on a salary basis, will be allowed as a deduction from income for the year 1947."

National Labour Code

One year ago an Act entitled the Industrial Relations and Disputes Investigation Act was proposed by the Federal Government. This Act included members of the medical and

dental professions which meant that the employment and all conditions relating to employment of dentists would be under the regulation of the existing labour union.

The Canadian Dental Association and other national professional organizations entered vigorous protest. The Act in revised form has now been introduced into the House, as of April 6, 1948, and under Section 2 (i) it is definitely stated that members of the medical, dental, architectural, engineering and legal professions are not included under the provisions of the Act.

NEWS FROM THE PROVINCES

ALBERTA

Edmonton and District Dental Society

More than 70 members of this Society attended the one day clinic by Dr. James Coupland of Ottawa, on April 26 in the Macdonald Hotel. Members were present from several outside points including Hardisty, Camrose, Wetaskiwin, Lloydminster, Ponoka and Peace River.

Dr. Coupland presented his clinic on Radiodontic Procedure, Simpson Technique under the following headings:

1. Position of the patient and operator.
2. Position of the film.
3. Machine.

Dr. Coupland was introduced by Dr. H. R. MacLean who mentioned that Dr. Coupland had presented this clinic at Vancouver and in the United States. The thanks of the Society was extended to Dr. Coupland at the conclusion of the clinic by Dr. Vic Lloyd.

At the luncheon Dr. Eldon Jamieson presented Dr. H. E. Bulyea with Honorary Life Membership in the Society. In making the presentation Dr. Jamieson spoke of Dr. Bulyea's many accomplishments as a dentist, a

specialist, an artist and as former director of the dental school. Dr. Bulyea thanked the Society for the honour and mentioned the many pleasant associations with the students and dentists of Alberta. While Dr. Bulyea is leaving for his old home in New Brunswick he hopes to be with us again before long.

During the intermission a film on the last world series baseball game between Brooklyn and New York was shown by the local promoter, Mr. John Ducey.

Following the dinner Dr. W. E. Addinell, President of the Alberta Dental Association spoke to the Society on matters of provincial interest.

At the final meeting of the 1947-48 term of this Society, the following slate of officers for 1948-49 were elected:

President Dr. G. E. Decker
 Vice-President Dr. H. Knight
 Social Convener Dr. W. Orobko
 Sec.-Treasurer Dr. D. McIntyre
 Directors: Dr. P. J. Kendal; Dr. R. H. McCormack; Dr. A. J. O'Neil.

An honorary life membership was presented to Dr. H. A. Gilchrist and Dr. J. McPherson, two prominent and outstanding members of the dental profession, by Dr. R. S. Decker.

Mr. George DuPre spoke to the Society on British Intelligence work in World War II.

Lethbridge Dental Association

At the regular monthly meeting of this Association held on April 14, 1948, elections were held for a new Executive. Dr. A. R. S. Gray was chosen as President; Dr. D. Rylands as Vice-President; and Dr. K. A. McMurchy as Secretary-Treasurer. The new officers were installed immediately.

A welcome was extended to Dr. E. E. Fletcher, formerly of Medicine Hat, who is now practising in Lethbridge.

K. A. MCMURCHY

Calgary Dental Society

The regular meeting of this Society was held in the Palliser Hotel, May 10.

Following dinner an extensive business meeting was held. A new Constitution drafted by Drs. Powell, Steeves and Clay was brought before the meeting and after considerable discussion was accepted. Election of officers for the next term was held and the following members were elected:

President Dr. J. G. Walker
 Vice-President Dr. C. S. Lea
 Secretary-Treasurer Dr. C. M. Johnston

A new committee was formed to look after the bowling league for next winter. All present were told of the coming golf tournament with the Edmonton Society, to be held in Red Deer on June 13.

The meeting was concluded with some very fine coloured slides of England, Scotland and Holland presented by Dr. Ross Upton.

Free Hospitalization

In a recent radio address Dr. W. W. Cross, Alberta Minister of Health, said there 'is a possibility that the Alberta Provincial Government will be in a position within the next year to provide "complete free hospitalization to all our people without any additional cost." The minister stated that the provincial government is now paying more than 50 percent of all hospitalization in Alberta. "We are hopeful," he added, "that the grants from the federal government that were proposed under the tax transfer agreement will be available to us within the next twelve months and, if this should happen, then we will be in a position to provide complete free hospitalization to all our people without any additional tax."—Canadian Hospital, March, 1948.

SASKATCHEWAN

Moose Jaw Dental Society

This Society has had a most successful year under the leadership of Dr. A. E. Chegwin.

Beginning in November with a lecture by Dr. R. Gordon Agnew, each monthly meeting has had a lecturer or clinician.

The members attending different courses brought back information of value and pleasingly presented their new ideas to an interested Society.

In April the members of the Regina Dental Society with their wives were entertained, Dr. Rosenfeld of Regina being the speaker.

The Swift Current Experiment

by A. D. KELLY, M.B., Toronto, Ont.

Condensed from Canadian Med. Assoc. Jour., May, 1948

To the student of health insurance, no more interesting experiment exists in Canada today than that which is proceeding in Saskatchewan's Health Region No. 1. The area covered

consists of 87 municipalities and local improvement districts in the southwest corner of the province, with a total population of 54,000 persons. The region is predominantly rural, but the city of Swift Current, the towns of Maple Creek and Shaunavon, with populations of 6,200, 1,200 and 1,600 respectively, are included. The principal industry of the region is agriculture, and the economy is subject to wide fluctuations of prosperity and depression. In the "dusty 30's" this area was extremely hard hit, and a relatively large proportion of the people required public assistance.

The benefits provided may be specifically stated as follows:

(a) The services of general practitioners. There are at present 34 doctors practising in the region and all participate in the plan by rendering medical services.

(b) The services of specialists.

(c) Diagnostic and Out-patient service. Radiological and clinical laboratory facilities are available at several hospitals within the region.

(d) Dental services. A reasonably complete dental service is provided for residents of the region under the age of 16 years. The services of private practitioners of dentistry are utilized in addition to the work of three salaried dentists who operate travelling clinics within the area. Beginning January 1, 1948, the utilization of private dental practitioners has been curtailed and it is hoped that the services of the travelling clinics will suffice to render dental care to the youthful population.

(e) Preventive services. The region is served by a full time staff in Public Health, consisting of a medical officer of health, seven public health nurses who are certified inoculists, a health educator and three sanitary inspectors.

The remuneration of the doctors reflects the volume of work done and during the calendar year 1947 the average gross income of the 34 participating physicians of the Region from this source was \$11,807. In assigning net figures it should be estimated that the expenses of practice amount to approximately 35% of gross income.

For the year 1948 it has been decided that revenue within the region shall be raised on the following basis: (a) personal tax—\$15 for a single individual, \$24 for a family of two, \$30 for a family of three, \$35 for a family of

four or over; (b) land tax—2.2 mills on the assessed value of the property.

A typical family of four or more persons resident in Health Region No. 1 will, during 1948, make the following contributions for complete health services: (1) Personal taxes (a) for medical and surgical care, \$35 (family maximum); (b) for hospital care, to Saskatchewan Hospital Services Plan, \$20 (family maximum \$30); (2) Property tax, 2.2 mills on the assessed value of land.

The fee-for-service method of remuneration which is favoured by the medical profession has been adopted for the payment of practising physicians. Only two doctors, the radiologist and the medical officer of health, are remunerated by salary.

Western Canada Dental Society, Saskatoon, June, 1949

The following is a list of the various chairmen of committees in charge of the arrangements for the W.C.D.S. Convention in June of 1949 in Saskatoon.

<i>General Chairman</i>	Dr. C. B. Hallett
<i>Speakers (Main Clinicians)</i>	
	Dr. W. P. Winthrope
<i>Table Clinics</i>	Dr. E. B. Nagle
<i>Accommodation</i>	Dr. D. Neuman
<i>Luncheon</i>	Dr. R. L. Toren
<i>Exhibits</i>	Dr. B. Wall
<i>Program</i>	Dr. N. F. Gropper
<i>Golf</i>	Dr. F. Smith
<i>Reception</i>	Dr. F. Skinner
<i>Banquet</i>	Dr. L. Skinner
<i>Liaison</i>	Dr. W. Waite
<i>Publicity</i>	Dr. V. Little
<i>Ladies</i>	Mrs. L. Toren
<i>Technical Arrangements</i> ...	Dr. R. E. Dickson

MANITOBA

Winnipeg Dental Nurses' and Assistants' Association

This Association held its wind-up dinner at Moore's, May 10. Miss Hazel Wylie assisted by Mrs. Sue Gordon and Miss Mary Light conducted a beautiful candle light service for the installing of officers for 1948-49.

<i>President</i>	Miss Kay Hoffard
<i>Vice-President</i>	Miss Mary Davidson
<i>Recording Secretary</i> ...	Miss Margaret Kitching
<i>Treasurer</i>	Miss Constance McKinnon
<i>Corresponding Sec.</i> ...	Miss Martha Livingstone

<i>Membership</i>	Miss Jane McLure
<i>Program</i>	Miss Margaret Groff
<i>Social</i>	Miss Marion Smith
<i>Sick and Visiting</i>	Miss Irene Russell
<i>Editorial</i>	Mrs. F. Jeffrey
<i>Armed Service (hospital)</i>	
	Miss Margaret Gilbert

ONTARIO

Niagara Peninsula Dental Association

The Third Dinner Meeting of this Association, held in Welland, Ontario, on February 13, proved to be one of the most interesting and entertaining of the entire season. The speaker, Dr. Edward Taylor of Austin, Texas, who is Director of Dental Services for that State, gave a very comprehensive outline of the work done on "Fluorine and its relation to Dental Caries" in Texas, with reference to "Deaf Smith County".

An added attraction was Mr. Beryl Elliston whose dry humour was as excellent as his movies on "Deaf Smith County". Both men were extremely loud in their praise of Ontario hospitality.

A very successful season for 1947-48 was brought to a close with the Fourth and final Regular Dinner Meeting held in St. Catharines, Ontario on March 12, with both an afternoon and an evening session. Dr. Chas. Moses of Toronto was the guest clinician and his presentations of "Impressions, Articulation and Complete Denture Procedure" in the afternoon and "Immediate Denture Technique" in the evening were well received by all in attendance.

Immediately following dinner, election of officers for the 1948-49 season was held, with the following results:

<i>President:</i>	Dr. F. E. Dawe, St. Catharines
<i>Vice-President:</i>	Dr. E. C. Butcher, Port Colborne
<i>Treasurer:</i>	Dr. L. G. Bannister, Niagara-on-the-Lake
<i>Secretary:</i>	Dr. M. C. Parkes, St. Catharines
<i>Directors:</i>	Dr. D. G. Johnstone, Niagara Falls; Dr. L. R. Pattison, Welland.

On April 9, the Association sponsored a "Commercial Evening" as an added feature to its regular program for the season. Representatives of the Ash-Temple Company, The Dental Company of Canada and the Dominion Dental Company acted as hosts and the program was supplied by Mr. Harry Hall of Justi

and Son, Inc. Dental assistants in the district were also in attendance and the entire evening proved a very enjoyable and instructive affair.

So we write *Finis* to a big season, with high hopes for a bigger and better one next Fall.

W. B. SMEATON, *Sec.*

Thunder Bay Dental Society

On April 30 this society held two clinics in Fort William. The clinician was Dr. J. Wallace Graham of Toronto. In the afternoon he spoke on "Heart Diseases and their Relationship to Dentistry", which clinic was attended by the members of the Thunder Bay Dental Society. In the evening Dr. Graham spoke on "Diagnosis and Treatment of Rheumatic Diseases with Special Reference to Infection". The evening session was attended by both Dental and Medical Society members.

At the dinner held between the two sessions Dr. H. Gellatly proposed the toast to the University of Toronto which was responded to by Dr. Graham. Dr. G. K. McKeown, president of the Thunder Bay Dental Society was the chairman at both meetings and at the dinner Dr. F. Blatchford introduced Dr. Graham.

Kent Dental Society

At a meeting of this society held in April the following officers were elected:

<i>President</i>	Dr. George W. Cornell
<i>Vice-President</i>	Dr. R. C. McCutcheon
<i>Secretary</i>	
<i>Treasurer</i>	Dr. J. C. Williard
<i>Counselors:</i>	Dr. H. S. Flagan, Dr. Ross Drummond

Dr. C. L. Strachan, in charge of organizing the Defence Dental Association in Southern Ontario during the war was the guest speaker.

Ontario Dental Nurses' and Assistants' Association

The third Executive meeting of this Association was held in the Walker House in Toronto, April 24 and 25. Dinner was served in the Board Room and members were welcomed by the President, Miss Helen Dosman.

Miss Dosman was in charge of the sessions when reports from the various conveners were heard and business in connection with each was considered.

Those present were: Miss Helen Dosman, Brantford; Secretary Mrs. Ilene Butler, Toronto; Corresponding Secretary Miss Elizabeth

Brown, Toronto; Treasurer Miss Mura Dunn Seeley, Hamilton; Bulletin Editor Miss Loretta McCaughey, London; Publicity Convener Miss Mildred Emmerton, London; Benevolent Convener Mrs. Leta Blabber, Toronto; Archivist Mrs. Marion Edwards, Toronto; Pin Convener Kay Scott, Brantford; Membership Convener Miss Helen Wilkinson, Hamilton; Convention Convener Miss Anne Kirkland, Kitchener; Clinics Convener Miss Rita Larocque, Belleville; Luncheon Convener Miss Larry Ohlheiser, Kitchener; Special Contest Convener Miss Irene Brown, Windsor; Convention Hostess Miss Lois Easton, St. Catharines. Others present were Miss Christene Mack, Toronto; Mrs. Irene Bruce, Toronto; and Mrs. Tomye Turner, Toronto.

Eighty-First Annual Convention Ontario Dental Association

This Association has conducted another successful convention. A guest was asked what impressed him most about the meeting and he replied "Its organization and the smoothness with which all the splendid arrangements were carried out." This is a compliment well deserved by President Lowery, the members of the Board of Governors and all those associated with them in planning and conducting Canada's largest annual dental meeting. The total registration including 950 dentists, 123 of whom were accompanied by their ladies, 100 students, 246 dental nurses and dental assistants and 252 exhibitors made a grand total of 1,671 persons.

The formal opening proceedings did not take place until the general sessions on Monday May 17, but actually the first number on the program was presented on Sunday evening by the Dental Alumni Association of the University of Toronto. It consisted of a musicale arranged for the enjoyment of those arriving early for the convention. The artists contributing were the Secondary School Men Teachers' Choir under the baton of Mr. Eldon Brethur; Miss Mary Ann Paul, an accomplished violinist and daughter of Dr. and Mrs. Gordon Paul, and Miss Louise Roy, a lyric soprano and a finalist in the well-known York Knitting Mills radio series of programs. The evening was a musical treat and did much to provide an atmosphere of good fellowship which continued throughout the events to follow.

For the early risers and those active in Dental Public Health promotion, there was a breakfast meeting at 8 a.m. Monday morning. This was well attended and was under the chairmanship of Dr. R. R. Butler in the absence of Dr. John J. Craig of Peterborough who was ill. Those who spoke were Drs. Harold Swales, George Clark, Ottawa, S. L. Honey, Welland, S. A. MacGregor and D. W. Gullett.

Dr. Gullett discussed the significance of the proposed new Dominion health program recently announced by Prime Minister Mackenzie King. There were three points in which he suggested dentistry was particularly interested:

1. Large sum of money to be spent on training professional personnel for Public Health service.
2. Large sum of money to be spent for planning health insurance in each province. It was mentioned that a plan of dental care would be introduced for children in the beginning and later extended to include adults.
3. Large sum of money to be spent for research concerning which dentistry must plan to share and make good use of.

Other speakers outlined Dental Public Health educational activities with particular reference to the Ottawa and the Welland-Crowland projects together with results obtained in these areas. At the conclusion of the meeting Dr. Don Johnstone of Niagara Falls was elected president of the Dental Public Health Council for 1948-49.

The luncheon speakers of the Convention, Dr. G. Edward Hall, president, University of Western Ontario, and Dr. Leo W. Sturgeon, Medical Officer of Health in the Welland-Crowland Health Unit, both emphasized the value of, and the need for, dental health education in the preventive field.

Dr. Sturgeon pointed out that no health program was complete unless all phases were included and continued to present an able discussion of the dental aspects based on results in his own area.

Dr. Hall suggested a need for a changed health concept. He presented figures to indicate that the average age of Canada's population is becoming older because of an increase in the individual life expectancy. With increasing age comes additional problems which must be added to our professional responsibilities. For example, there are 12 million people in Canada and of these 350 thou-

sand are absent from business daily because of illness. Maintenance of health then becomes a vital approach to health care. The changing of a health concept is slow, he declared, but the concept of prevention must be stressed and broadened to include the positive features of health as well as the negative aspect of disease. Problems for the dentist begin with professional dental education in Dental Public Health and continue through practice, lay education, research and service.

Dr. Hall, concluding his address on the note of research, suggested: "Wishful thinking without action produces nothing but stagnation; intelligent thinking based upon sound education and special training, followed by good planning, can lead in the presence of adequate facilities and with adequate personnel, to sound research. Dentistry has a real challenge today. Its future depends upon progress and that progress lies in research. Research is its right, privilege and responsibility."

The program provided for the general session period presented a practical side of preventive dental care. It consisted of two lectures on the subject of fluorine and its usefulness in preventing dental caries. Dr. John W. Knutson of the American Public Health service, Washington, and Dr. H. Shirley Dwyer, Director of the Dental Division, New Hampshire state department of health, were the essayists. The high lights of the discussion might be summarized as follows: Fluorine has been found to be useful in reducing caries incidence in children. There are two possible applications: (1)—Adding Fluorine to the community water supply in concentration of one part in a million. (2)—Making a local application of 2% sodium fluoride solution directly to the teeth. The local application should begin at the age of 3 and repeated at ages 7, 10 and 13 years. The treatment at each age should consist of 4 applications one week apart, using the following technique—a prophylaxis before the initial application, then isolate and dry the teeth in one quadrant of the mouth and apply the 2% sodium fluoride solution. Allow this to dry for two minutes. Continue around the mouth until all the teeth have been treated. The speakers favoured the local application method because it immediately gave a 40% greater immunity to caries than if the child had not been treated, whereas in adding

fluorine to the drinking water results are not so definite or immediate.

So much for the stimulation from this part of the Convention program. It is a necessary thing to ponder and promote new ideas and principles because in time they will add to the achievements of dental science. That is one aspect of progress; another phase is to continue improving our techniques and methods of dealing with the problems associated with dental disease. In this connection there were many excellent presentations as the following list of lectures will indicate: Surgery—Drs. E. Reiter, W. W. Breslin and L. J. Fenech; Dentistry for children—Drs. A. E. Seyler, M. G. Boyes and H. R. Skilling; Operative Dentistry—Drs. E. C. Miller, C. A. Rudell, P. G. Anderson, C. S. Sullivan; Prosthodontia—Drs. V. Trapazzano, J. A. Bothwell, T. N. Scott, I. H. Ante; Radiography—Prof. H. M. Worth. It was not possible for one individual to attend all the lectures, so no attempt can be made to report on the subject matter—suffice it to say much time and effort as well as ability went into each presentation to the profitable enjoyment of each individual audience.

Another very popular part of the usual Convention program is "Table Clinics." Forty of these were listed and many of them were deserving of the status of lecture clinics because of the fine material and the elaborate preparation. To be sure, no one could spend an afternoon among these many demonstrators without carrying home several helpful ideas. Then, too, the dental trades and manufacturers had a fine display and they too embarked on a series of table demonstrations presenting the uses of newer materials and equipment useful to the dentist. This was a very valuable part of the program because many dentists practising in smaller centres have no other opportunity of becoming acquainted with what is available for use in their practices.

On the social side there were some splendid functions. Outstanding perhaps was the celebration of a quarter century of service by the members of Class 2T3. As every one knows, it was a grand reunion, and a great thrill to see faces after 25 years—a little older, a little grey perhaps, but still the same old smile—the "Whizz Bang" was still as vigorous as ever. Congratulations, fellows, on your Anniversary. Then our President's dinner dance arranged by a ladies' committee under

the leadership of Mrs. R. P. Lowery was as popular as ever and well patronized. And of course there were many other important functions, especially to certain members of the Association—the ladies' visit through Sunnybrook Hospital and the fraternity dinners, class parties and finally the Golf Tournament, to bring the convention to a close.

The Convention was a profitable outing for all who attended, and the splendid attendance must be a satisfaction to those who planned the program and gave direction to its many activities.

T. R. M.

BOARD OF GOVERNORS

ONTARIO DENTAL ASSOCIATION 1948-49

President Dr. A. R. Poag, Hamilton
Vice-President Dr. L. M. Grose
Past-President Dr. R. P. Lowery
Historian & Archivist Dr. G. V. Morton
Secretary-Treasurer Miss Dorothy Jutton
Governors Dr. W. K. Prendergast; Dr. W. D. Clark; Dr. D. L. McKerracher; Dr. H. R. Skilling; Dr. Russel Woods; Dr. H. B. Legate; Dr. H. A. Swales.

Dental Public Health Committee: Dr. R. R. Butler; Dr. I. E. C. McGowan; Dr. A. W. S. Wood; Dr. S. A. MacGregor; Dr. W. J. Dunn; Dr. H. A. Swales, *Chairman*.

Toronto Ladies' Auxiliary

Mrs. M. G. Boyes, President of the Ladies' Auxiliary to the Academy of Dentistry, presided at the annual spring luncheon held at the Royal York Hotel.

Mr. Robert Foster was guest artist.

Dr. J. H. Johnston, President of the Academy of Dentistry brought greetings on behalf of the organization.

Over \$2,700.00 was raised during the year to equip a dental clinic for the Children's Aid Society.

Mrs. R. W. Matchett presented a bouquet of roses to the retiring president, Mrs. Boyes.

The executive for 1948-49 is as follows:

Past President Mrs. M. G. Boyes
President Mrs. A. F. Cooper
1st Vice-President Mrs. W. W. Philip
2nd Vice-President Mrs. R. G. Ellis
Recording Secretary Mrs. J. E. Verth
Corresponding Secretary

Mrs. K. M. McPherson

Treasurer Mrs. C. I. Treadwell

Councillors: Mrs. F. M. Shepherd, Mrs. J. G. Paterson, Mrs. J. D. Barnet, Mrs. J. G.

Glascott, Mrs. W. L. McMachen, Mrs. J. H. Johnston.

DAISY E. PATERSON, *Press Convener*

Toronto Study Club of Dental Technicians

The annual dinner meeting of this group was held at the Royal York Hotel on April 14. The program for the evening included a sound motion picture entitled "Recall your Future". It was presented by Mr. J. Allen of the H. D. Justi and Son Inc.

New officers of the Society are:

President Mr. J. C. Tebbutt
Vice-President Mr. C. Mellish
Secretary Mr. B. Brown
Treasurer Mr. J. Washbrook
Recording Secretary Mr. C. Blandford
Honorary Member Mr. C. Daly

NOVA SCOTIA

C.D.A. President and Secretary in Nova Scotia

This province has recently had the pleasure of a visit from Drs. Carver and Gullett, the occasion being a dinner at the Nova Scotian, presided over by Dr. H. M. Eaton, President of the Nova Scotia Dental Association.

A number of out of town men were present, including Dr. W. M. Buchanan from North Sydney, and practically all the profession from Windsor, and Truro. At the head table were three ex-presidents and a secretary of the C.D.A., all from this province.

Both Drs. Carver and Gullett gave excellent talks on the numerous and expanding activities of the Association. Perhaps few of us realize the extent of such activities, and how fortunate we are to have men of such devotion and calibre caring for the interests of dentistry. The concensus of opinion of the meeting was, that the C.D.A. is quite worthy of and will receive every support from this Province. W. C. O.

QUEBEC

Mount Royal Dental Society

The 27th annual meeting of this Society was held on April 13, in the Mount Royal Hotel, Montreal.

Reports from committee chairmen and executive members clearly indicated that the So-

ciety had completed another successful year. There was an average of two monthly meetings. At the monthly general meeting there usually was a guest speaker for the evening, or a clinician to present an all-day clinic. The second monthly meeting was a Study Group meeting, which consisted of one of our own members presenting a scientific paper, or demonstration of some dental technique. These meetings proved to be most popular, and were as well attended as our regular meetings.

The out-of-town clinicians during the year were Dr. I. A. Epstein, St. Paul, Minn., on "Office Efficiency." Dr. Bernhard Gottlieb, special course on "Dental Caries and General Dentistry." Dr. M. N. Rockman, Toronto, on "Orderly Procedure in Radiodontic Technique." Dr. J. Friedlander, New York City, on "Occlusion in Relation to Periodontia." Dr. Benjamin Kornfeld, New York City, on "Amalgam Restorations, and Psychosomatic Dentistry."

The officers elected for the coming year are:

President Dr. M. L. Simon
Vice-President Dr. B. Bernfeld
Secretary Dr. G. Zimmerman
Treasurer Dr. D. T. Shizgall
Assistant Secretary Dr. M. Godine
Executive Committee: Drs. I. Druckman, S. Hershon, L. Lightstone, D. H. Muhlstock, J. Rauch, M. Goldenberg.

G. ZIMMERMAN, *Secretary*.

NEW BRUNSWICK

New Brunswick Dental Society

A well attended meeting of this Society was held on April 14, at the Admiral Beatty Hotel in Saint John. The members were entertained at dinner and afterward listened with much interest to the two guest speakers, Dr. Carver, the President and Dr. Don Gullett, the Secretary of the Canadian Dental Association.

Dr. Carver gave a very excellent paper on major problems and accomplishment to date of the C.D.A. Dr. Gullett's talk was on policies and guidance given to communities on socialized dentistry.

Considerable discussion took place and many questions were answered by the two officials of the C.D.A.

The President of the N.B. Dental Society, Dr. Godin presided at the dinner and Dr. A. J. Coughlan, the N.B. representative of the C.D.A., introduced the speakers. The dinner

was under the auspices of the Saint John Dental Society.

At noon and prior to the dinner Dr. Coughlan gave a luncheon to the special guests and invited the members present in Saint John of the N.B. Dental Council.

Saint John Dental Society

At the annual meeting of this society the following officers were elected:

President R. S. Langstroth.
Vice-President S. K. Cogle.
Secretary L. O. Leger.
Treasurer Hugh F. Bonnell.
Advisory Committee: J. R. Hutchison, H. H. Peters and J. F. Edgcombe.

BRITISH COLUMBIA

College of Dental Surgeons of B.C.

Dr. John R. Ingledew was appointed by the Council to fill the vacancy created by the resignation of Dr. Gerald D. Stibbs who is now at the School of Dentistry, University of Washington.

At the meeting of the Vancouver and District Dental Society, the president of the Council, Dr. Jones, spoke of the need for dentists in many of the outlying districts and appealed to the members of the Society to assist in solving this problem.

British Columbia Convention

In spite of a backward spring, Victoria came through with some very fair weather for the British Columbia Convention at the Empress Hotel on April 16-17. Bathing beauties on the beaches were not seen but the daffodils and the broom were out in full bloom, with hundreds of other varieties of flowers, and it was no hardship to get around without even a raincoat over normal costume.

Many visitors attended from across the line—some of them as clinicians or essayists, some just as visitors from nearby states. Doctor Coupland, of Ottawa, shared top position among essayists with Doctor Bernard Thomas, of the staff of the University of Washington, and Doctor Frank Everett, from the University of Oregon. About two hundred members of the profession were present, and about fifty-five assistants attended the meetings of the dental assistants.

The newly appointed officers of the British Columbia Dental Society are:

President—Dr. G. A. C. Walley, of Vancouver

President-elect—Dr. Leslie G. Robinson, of New Westminster

Secretary—Dr. C. M. Whitworth of Vancouver

Treasurer—Dr. Douglas Sutherland, of Vancouver

Board of Censors:—Dr. Leslie Marshall, of Vancouver; Dr. L. B. Alexander, of Haney; Dr. L. E. English, of Kamloops

Continuing members of the Board of Censors are: Dr. Lloyd Jacobson, of New Westminster; Dr. Alec Gunning, of Victoria.

At golf, on Saturday afternoon, Dr. Whitmore and Dr. H. Gill, both of Victoria, demonstrated their superiority on home grounds, and the usual secondary prizes were well distributed among other contenders.

Congratulations are due to Dr. T. H. Johns, Dr. Harold Turner, and all the members of committees who arranged the convention. The operation was smoothly carried out, and a good distribution of clinical material was available. All this, coupled with Victoria's famous hospitality, combined to make the meeting a most enjoyable and educational interlude.

At the last meeting of the Vancouver and District Dental Society, Dr. W. D. McLeod, the newly elected President, received the gavel from his predecessor, Dr. Eric Nordin. The business of the meeting was quickly disposed of, and an evening of relaxation and entertainment followed. A few days later, the Annual Golf Tournament was held at the Fraser course.

Some interest is being shown in the preparations for the Pacific Coast Dental Conference at Salt Lake City, Utah, on July 6-12. The registration department reports that the registration from British Columbia is encouraging, even at this early date.

L. G. R.

Vancouver and District Dental Society

During the recent trip of Dr. J. P. Coupland of Ottawa through the Prairie Provinces then through to the Coast he gave clinics to groups in Portland, Oregon; Seattle, Washington; to the B. C. Dental Association; the Vancouver and District Dental Society and a special course of instruction to the Vancouver Study Club.

The Vancouver and District Dental Society meeting took the form of afternoon and eve-

ning sessions.

In the afternoon his presentation dealt with the Requirements of a Radiodontic Survey. In the evening he spoke on the Role of Radiography in Dentistry. Dr. Coupland had a wealth of slides to illustrate many phases of the above subjects and he presented his thoughts with clearness and ability that brought to the membership many points of practical application.

The final meeting for the season 1947-8 was held on May 4 in the Hotel Vancouver, and at this time the officers reported on the activities of their term.

The retiring president Dr. Eric Nordin told in general terms of a most successful season and paid tribute to his officers and committee; Dr. Ken McWilliams, the Secretary-Treasurer reported a new high in membership as well as a very healthy financial condition. Dr. Hamilton Simmons the Chairman of the Program Committee reviewed the programs, all well chosen and received. Dr. Norm. Scott, the tireless Chairman of the Membership Committee set high the sights for next season but also reported a net increase in Membership of 33 to a new high.

Dr. John Ingledew, past president, presented to the retiring president Dr. Nordin an engraved gavel to remind him of his term of office after which Dr. Ken McWilliams who has served for several years as Secretary-Treasurer and is now retiring was made a presentation to remind him too of his service to the Society.

The annual golf tournament was scheduled for May 6 at the Fraser Golf Course.

The new officers for the season 1948-9 duly installed at this meeting were:

President Dr. W. D. MacLeod

President-elect Dr. Hamilton Simmons

Sec'y Treas. Dr. Norm. Scott

Board of Governors: Dr. J. W. Gallagher;

Dr. C. Hallman; Dr. Alex Dobbins; Dr.

S. McQueen.

After adjournment of the annual meeting the Society was entertained for some time by an excellent variety program.

Victoria and District Dental Society

The last three monthly meetings of this Society were most outstanding.

On January 19 the Society was honoured in having as guest clinician Dr. Roy West of

Seattle, Washington, specialist in Oral Surgery. Having conducted clinics in most large centres in Canada and the United States, Dr. West is well-known by a large majority of dentists. He spoke to the Society on the "Diagnosis of Dental Pain and Local Anaesthetics" followed by the showing of his most instructive films on "Oral Surgery".

At the beginning of this meeting a one minute silence was observed by the members in honour of the late Dr. Wm. Lea, Registrar of the B.C. College of Dental Surgeons.

February 16 was another notable meeting when the guest clinician was Dr. Walter K. Sproule, of Vancouver. Dr. Sproule, a friend to many and always a welcome visitor, gave a most instructive and interesting table clinic on the "Hollenbeck Vacuum Investing Technique for Gold Inlays". At this meeting respect was paid to one of the Society's respected and faithful members, Dr. A. McCarter, who passed away on February 4.

On March 15 the Society was privileged in having another great man in dentistry as guest clinician, Dr. John C. Brauer. Dr. Brauer is Director of Postgraduate Dental Education and Professor of Pedodontics, School of Dentistry, University of Washington. In his introductory remarks, Dr. Brauer spoke briefly on the new school of dentistry at the University of Washington and gave some very interesting dental data collected while he was chief of the Dental Standards Branch, Surgeon General's Office in Washington, D.C., during the war. The title of his address was "The Child and Your Practice". The presentation included a discussion of the dental needs for children, and the clinical problems related to the successful conduct of a practice. Various phases of diagnosis as related to the child patient were presented with the use of illustrations. It has been encouraging to the Executive to have a record attendance at these meetings.

Dr. McGregor Visits B.C.

The Dental Profession in B.C. were particularly fortunate during the month of March in having Dr. Sandy McGregor of Toronto, give clinics in "Dentistry for Children" in the cities of Kamloops, Victoria and Vancouver.

The interest shown by our members and the large numbers who took the course was evidence enough that the subject at hand is

assuming a matter of grave importance to all those who have the welfare of the future generation at heart.

Dr. McGregor's message was an appeal for more dentists to take a larger number of children, especially the pre-school child, into their offices to treat the ever increasing amount of dental caries in the foundation teeth. By gaining the confidence of the child through a sensible and reasonable course of determination by the operator, went a long way into making children's work a greater source of enjoyment and personal satisfaction in a worthwhile course.

Speakers during the banquet at the Hotel Vancouver were Dr. G. F. Amyot, Deputy Minister of Health for the Province of B.C.; Dr. Stewart Murray, Chief Medical Health Officer for the City of Vancouver; Dr. Harry Thompson, of the Canadian Dental Hygiene Council; and Dr. Reba Willets, Chief Medical Officer for the city of Vancouver Schools.

Vancouver Dental Assistants' Association

The regular monthly meeting of this Association was held Mar. 8 in Chris' Grill with 39 members present. The guest speaker for the evening was Marjory Bagley, President of the B.C. Dental Assistants' Association. She spoke on the convention to be held in Victoria on April 16-17. The Vancouver girls were asked to put on clinics and Miss Bagley, suggested that a paper might be given on some interesting subject. She urged as many as possible to attend.

Gwen Hilliard presented her clinic of "Tiny Timely Tips", which offered some very helpful hints. The regular 5 min. clinic was cancelled in order that the convention might be discussed.

Sales Tax

The Winnipeg Free Press has this to say about the three per cent sales tax being imposed by the B.C. government: "Mr. Anscomb, the finance minister, once the most ardent advocate of economy and now the most generous spender in Canada, has contrived the sales tax so that it will enter into and complicate nearly all business operations. For instance, a dentist installing a set of false teeth must pay the tax on the teeth and also on his bill for his services."

EMPIRE NEWS**INDIA****All India Dental Association**

*Affiliated with the American & British
Dental Associations. Head Office 13
Curzon Road, New Delhi.*

Re: DENTISTS' ACT—1948.

The Dentists' Act—1948 was passed by the Parliament of the Union of India on February 26, 1948, which brings India in line with other countries of the British Commonwealth by having a Dental Act. This is an Act by the Central Government and will have jurisdiction over all the Provinces and States of India. The Act provides for the immediate establishment of registers:

- (1) for Dentists,
- (2) for Dental Hygienists, and
- (3) for Dental Mechanics.

1.—The Dentists' register is divided into two parts, i.e., "A" and "B". Part "A" consists of those persons who are qualified from recognized dental schools in India and abroad according to the Schedule attached to the Act and "B" for those who are not qualified but can prove that they have been in practice in dentistry for the last five years. These persons will be entitled to sit for an examination within a period of five years to qualify to come on part "A" of the register. After the first registration, register "B" will cease to exist and no person other than qualified dental surgeons will thereafter be entitled to register or practise in the Dominion.

2.—Only Indian citizens can register for practise in the Union until and unless a scheme of reciprocity has been established between foreign countries and the Dental Council of India. The scheme of reciprocity insists that qualified Indian Dental Surgeons shall be allowed to register and practise in that foreign country before nationals of the same country are allowed to register and practise in India, "under conditions not more onerous than those imposed on the nationals of that State or country to enter and practise the profession of dentistry in India".

3.—Henceforth, no unregistered person shall be allowed to use the titles of Dental Surgeon, Dental Practitioner, Surgeon Dentist etc., nor will be admitted to practise in the Union. The penalty for the same is a fine and imprisonment. Companies will not

be allowed to engage in the practice of dentistry in India unless the majority of the Directors are Dental Surgeons.

4.—The All India Dental Association is responsible for drafting this Act and the Central Government at every stage sought the advice and help of the All India Dental Association, and we are indeed proud today that after such a long period of unregistered practice India comes up in line with and at par with foreign countries, where dentistry is considered an important feature of public health. This Legislation was long overdue and the All India Dental Association feels very happy that at last this has come into force.

N. N. BERY, D.D.S., F.I.C.D.,
Honorary General Secretary.

GREAT BRITAIN**National Health Insurance**

Condensed from Editorial in Dental Record

The two main planks of our platform are first, that we want to do our work according to our individual lights; and we believe that the patient who accepts the advice of a dentist does not wish to have that advice checked or modified by some one whom he does not know. Secondly, we say that we do not want the State to be our sole paymaster; and we believe that most of our patients wish to retain the patient-practitioner relationship and dislike the prospect of changing it for something similar to the taxpayer-civil servant relationship.

In the main we do not object to the Act; it is the Regulations which the Minister states he will make under the Act to which we take exception. We are entitled to base our objections solely on professional interests but we neither wish nor need to do so. Whittling down the exercise of a practitioner's judgment will be bad for his professional development and will ultimately affect adversely the interests of the patient by establishing the principle of "diagnosis from a distance". Having the State as the sole source of income for one who has to bear all the expenses of providing treatment, puts him too much at the mercy of bureaucracy. The one who pays the piper calls the tune. Unless the patient pays some of the fee direct, not only will he run the danger of not being

able to call the tune, he will also find in course of time that his interests can be subject to the machinery of the Service.

These evils lie not in the Act itself but in the Regulations. They can be altered with-

out in any way altering the Act and they can be altered to the advantage of both patient and dentist. We fight primarily for ourselves, but not only for ourselves—we fight for principles, not pence.

GENERAL NEWS

Tropicalization of Dental Supplies and Equipment

A report on "Tropicalization of Dental Supplies and Equipment" based on a survey undertaken by the Royal Canadian Dental Corps in preparation for possible use in tropical climates in the war against Japan, has been presented to the Associate Committee on Dental Research of the National Research Council and published in its proceedings. As Japan capitulated before Canadian Forces were called upon to take the field, the alteration of R.C.D.C. equipment and supplies was not completed. The findings are condensed in this report for reference and record purpose.

The Associate Committee on Dental Research announces that copies of the Tropicalization Report may be secured on request from Mr. S. J. Cook, Secretary of the Committee, National Research Council, Ottawa, Ontario.

The report states that very little information was available as to the exact behaviour of certain items of dental supplies and equipment, under tropical conditions, although there were many reports from various sources as to the unsuitability of some items, which were satisfactory in more temperate climates.

In general, the information sought and the recommendations arising from this review had, as an objective, the provision of dental treatment for Canadian personnel on as comprehensive a scale, and to the standard, now obtainable in Canada. In consequence, consideration was given to working conditions for personnel in tropical areas, and the necessary administrative requirements as well as the effects of climate on dental disease, stores, equipment and supply problems. While the area covered was confined to India, Ceylon and North Africa, the survey should be equally applicable to other tropical areas.

OTTAWA, May, 11, 1948.

Approval of Specialty Boards in U.S.A.

Formal approval of two additional dental specialty boards was announced February 24 by the Council on Dental Education of the American Dental Association. They are the American Board of Pedodontics and the American Board of Prosthodontics. Approval of these two boards make a total of four dental specialty boards approved by the Association. Those approved previously are the American Board of Oral Surgery and the American Board of Periodontology. These boards are authorized to conduct examinations of and to certify dental specialists in accordance with requirements established by the Council on Dental Education.

Number of Dentists in U.S.A.

The number of dentists in the United States has increased more than 8,000 since 1940 to a total of 78,490, it has been reported by the Committee on Economics of the American Dental Association.

At present, the Committee reported, there are an estimated 1,817 residents of the nation for each dentist compared with the 1940 estimated ratio of one dentist to each 1,878 persons.

Distribution of dentists throughout the nation varies widely, ranging from one dentist for each 1,106 residents of New York State to one dentist for each 5,131 residents of Mississippi.

Big Variance in State Society Dues in U.S.A.

Membership dues of state dental societies of the American Dental Association range from a low of \$3 to a high of \$37 annually according to a recent survey conducted by the Central Office. The average membership dues of the 52 constituent (state) societies of the

A.D.A. are \$11.04 per year. State dues are assessed in addition to local or district society dues and the A.D.A. dues of \$6 annually.

The highest state society dues in the nation—\$37—are paid by members of the Southern California State Dental Association. Next highest are the \$24 annual dues of the state dental societies of California, Massachusetts and Nevada.

Lowest state dues are the \$3 a year of the New Mexico Society. Three other state societies—Indiana, Maine and Virginia—have dues of \$4 per year, the second lowest, and four state societies—Arkansas, Kentucky, New York and South Dakota—have annual dues of \$5, the next lowest amount.—*A.D.A.*

Chicago Dental Society Announces its Eighth Annual Prize Essay Competition

The Chicago Dental Society, to encourage continued scientific research in all phases of dentistry, again offers a cash prize of \$500.00 to the author of the most meritorious essay reporting an original investigation and containing new and significant material of value to dentistry.

The winner of the award will be invited to present his essay at the 84th Midwinter Meeting of the Chicago Dental Society to be held in Chicago, February 7-10, 1949 at the Stevens Hotel. Expenses of winner will be paid

by the Society and will be in addition to the prize of \$500.00.

Any member of the American Dental Association, or of a recognized foreign dental society, or anyone affiliated with a recognized institution in the dental field may apply for authorization to enter the competition. The contest is not limited to research men having technical staffs and elaborate equipment at their disposal, but is open to any qualified person who believes he has something new and important to contribute to dentistry. The rules are simple and fair and all contestants, whether students, teachers or practitioners, have an equal opportunity.

Application forms and contest rules may be obtained by writing to the Chicago Dental Society, 30 N. Michigan Ave., Chicago 2, Ill. All applications to participate must be filed in the office of the Society by October 2, 1943.

Longevity of American Physicians

Metropolitan Life Insurance Company studies show that after 35 the prospective lifetime of the American physician is somewhat less than that for white persons in the general population. At age 35 the average physician has almost as many years remaining as he has already lived. At age 45, the average physician may expect to live an additional quarter-century. At 65 he may still look forward to almost 12 years of life.

IN MEMORIAM

Lorenzo Dow Keown, of Moosomin, Saskatchewan, aged 89, died May 14. He was graduated from the Royal College of Dental Surgeons of Ontario and moved west in 1886, accompanied by his brother, also a dentist. They opened an office in Regina and were two of the first few dentists between Brandon, Manitoba and Calgary, Alberta.

Dr. Keown moved to Moosomin, Sask. in 1889 where he continued his practice until April 10, 1946, when he retired. His brother, Dr. W. G. Keown, died in Regina in 1889.

During his lifetime Dr. Keown held many important positions, being on the first Town Council, Mayor several times, a member of the School Board for 56 years, headed the

Red Cross, Patriotic societies, etc. He led the United Church choir for over 40 years. He belonged to the Masonic Order, the Odd Fellows and the Loyal Orange Lodge. He was a life-long conservative and a great believer in the policies of Sir John A. MacDonald.

Dr. Keown is survived by two sons, three grandchildren and one great grandchild.

Harry C. Skinner, of Guelph, Ontario, died May 6. He had practised in Guelph for nearly 50 years before retiring.

Dr. Skinner is survived by his widow and one son, Dr. Allen Skinner, of London, Ontario.

LA NUTRITION ET LA CARIE

par ANTONIO RENY, B.A., D.D.S., Québec

Un nombre incalculable de recherches ont été faites et se poursuivent encore de nos jours sur les causes de la carie dentaire.

Son aspect bio-chimique a été étudié sous différents angles: analyse de la salive, du sang et des dents; leur contenu en calcium, phosphore, CO_2 , en fluor et en matières organiques. Tous ces travaux ont été poursuivis dans le but de chercher si les éléments, plus haut mentionnés, contenus dans ces trois tissus, pouvaient avoir une relation quelconque avec la carie des dents.

Son aspect bactériologique a rencontré des partisans enthousiastes dans plusieurs pays, notamment en Allemagne et en Amérique; aux Etats-Unis, c'est à l'Ecole de Bunting, à Ann Harbor, où les travaux ont été poursuivis avec le plus d'intensité. Cette école, reprenant la vieille théorie de Miller, qui a prétendu, à la fin du dernier siècle, que la carie était due à l'acidité produite par certaines bactéries, contenues dans la salive, au contact des hydrocarbonés, a réussi à mesurer, d'une manière quantitative, les microbes de la famille des lactobacilles. Cette découverte est d'une grande importance, en ce qu'elle permet, aujourd'hui, de calculer, d'une manière beaucoup plus rapide, plus précise et scientifique, le degré de carie chez les sujets servant dans les expériences scientifiques.

Enfin, la cause principale de la carie, d'après plusieurs auteurs, serait due au manque de calcification des dents, et elle

aurait pour cause un métabolisme anormal ou une mauvaise alimentation!

Il est reconnu depuis très longtemps, qu'une dent bien calcifiée résiste d'avantage à la carie dentaire. Le Dr D. D. Boyd, (I) professeur de pédiatrie à l'Université d'Iowa, prétend que la carie, sur les dents temporaires, peut devenir inactive dans une période variant de quelques semaines à plusieurs mois, si les sujets suivent régulièrement une diète riche et bien balancée, comprenant tous les matériaux nécessaires à la nutrition. "Arrest of decay," dit-il, "was measured through the resistance of exposed dentin to the exploring time. Such dentin became as impervious as porcelain cement, and remained in this status, as long as the prescribed diet was enforced." Tous les auteurs reconnaissent que la calcification joue un grand rôle dans le phénomène de la carie dentaire. Il ne faut pas, cependant, demander à la nutrition plus qu'elle ne peut donner. Bien des facteurs entrent en ligne de compte dans le métabolisme du corps humain. Principalement en ce qui concerne la calcification des dents, c'est une question assez compliquée, qui ne se limite pas à une prescription de calcium et de vitamine. Vous avez tous, dans votre pratique, été mis en présence des deux faits suivants: Exemple. Une de mes clientes se présente à mon bureau, avec son enfant, âgé de 5 ans. L'examen de sa bouche me révèle plusieurs caries, surtout dans la région des petites molaires; et la maman, ex-infirmière d'une

unité sanitaire, de me dire: "Je n'y comprends rien. J'ai pourtant apporté une grande attention à mon alimentation, durant ma grossesse, et depuis qu'il est né, mon enfant a reçu tout ce que je crois nécessaire à une bonne calcification et voyez le résultat."

Une autre jeune maman vient me voir dernièrement, quelques mois après son accouchement. Je constate plusieurs caries, dans la région des molaires et des incisives supérieures. Ma cliente me fit cette réflexion: "J'ai pourtant consulté mon médecin, au début de ma grossesse, et ce dernier m'a prescrit des pilules contenant du calcium et des vitamines afin de préserver mes dents contre la carie et voici le résultat."

De nombreux facteurs peuvent influencer la calcification des dents, tels que les troubles endocriniens, surtout ceux de la thyroïde et de la parathyroïde. L'étude de l'histologie dentaire nous a démontré que les cellules adamantoblastes (ou améloblastes) sont placées de telle sorte, dans les gencives, que l'éruption de chaque dent a pour effet de les faire disparaître. Nous nous trouvons alors en présence d'un fait probablement unique dans le métabolisme, celui d'un tissu sans aucun contact, avec la circulation sanguine. Ce phénomène fait dire à Isaac Schour, (2) professeur d'histologie dentaire à l'Université Illinois de Chicago, qu'après l'éruption d'une dent (permanente ou temporaire) les adamantoblastes étant disparues, et le tissu dépourvu de canaux vasculaires, l'émail ne peut subir de calcification et de décalcification secondaire. Sa valeur en sels minéraux restera la même, sa vie durant, quelques changements que puisse subir l'organisme durant ce même laps de temps. Ce qui revient à dire que la thérapeutique du calcium n'aurait aucun effet sur l'émail d'une dent formée.

Les maladies à haute température, telle que la pneumonie, la scarlatine et la rougeole, causent une perturbation sanguine, qui a pour effet de diminuer et même d'arrêter la calcification des os et des dents durant la maladie de l'enfant. Et très souvent, ces maladies laissent leur

trace sur les couronnes des dents, alors que l'os n'est nullement affecté. Vous avez tous fait connaissance avec la dent hypoplastique, cette dent mal calcifiée à un certain endroit et formant un sillon plus ou moins horizontal, se continuant sur les dents adjacentes, surtout les incisives permanentes. Dans presque tous les cas, nous pouvons fixer approximativement l'âge de telle maladie infectieuse dans le bas âge.

Si l'émail avait eu, comme l'os, le pouvoir de se recalcifier, la dent hypoplastique n'existerait pas. Autre exemple. Les glandes endocrines jouent un grand rôle dans le mécanisme de la calcification, principalement la parathyroïde que l'on a nommé, "l'endocrine du dentiste." Son rôle principal est de maintenir à son niveau normal, la quantité de calcium dans le plasma sanguin. (10 mg. par 100 cc.). Il a été prouvé que l'hypoparathyroïdisme amène une décalcification osseuse très prononcée, parce que l'hypofonction entraîne une diminution de la quantité de calcium dans le sang. En 1934, Charles C. Thomas (3), de Springfield, Ill., fit une étude histologique des dents d'un enfant âgé de 15 ans, qui avait souffert d'une tumeur de la parathyroïde; il nota une résorption très prononcée du calcium dans les os de la mâchoire, mais aucun signe de décalcification dans les dents et il conclut ainsi: "The teeth do not take part in the generalized decalcification. They may fall out on account of the disease of the jaws, but they themselves remain well calcified." D'autres expériences du même genre, faites par Albright et Bauer (4) auraient, paraît-il, donné le même résultat.

Le Conseil de la Thérapeutique Dentaire Américaine a publié en 1938, un rapport, préparé par leur secrétaire, Samuel Gordon, de Chicago. (5) Ce rapport, intitulé, "Calcium and Phosphorus Compounds in Dentistry," contient cette assertion plutôt surprenante: "The adult tooth, carious and non-carious, can not be affected by calcium therapy."

Les auteurs, cités plus haut, prétendent que, non seulement l'émail, mais même la dentine n'est pas sujette à la décalcification. (6) Le Dr Isaac Schour, dans un

article intitulé, "Experimental Dental Histophysiology," affirme en toute lettre: "Enamel and dentin are not subject to calcium withdrawal." Comment expliquent-ils ce phénomène? D'abord en partant du principe que la dentine étant, elle aussi, dépourvue de canaux vasculaires, n'est pas un réservoir de calcium et qu'elle ne peut subir de changement; et ils semblent prouver cette théorie par des expériences précises, *in vitro* et *in vivo*. Schour affirme que de nombreuses expériences pratiquées sur des rats se sont toutes avérées négatives. Le même auteur après nous avoir démontré, avec plaques microscopiques à appui (7) les mauvais effets, que peuvent produire l'hypo- et l'hyperfonction de la parathyroïde, sur les dents, en voie de formation, ajoute ceci: "The enamel and dentin of the incisors and molars, formed and calcified before the experimental period, showed no changes."

Cependant, la calcification secondaire de la dentine n'est pas une fable. C'est un fait prouvé, que tous les dentistes constatent journellement. En effet, les odontoblastes continuent leur travail après l'éruption de la dent. Leur activité est moindre, mais cependant réelle. La dentine reste continuellement en contact avec la circulation sanguine. Elle serait sujette à la recalcification et vis-et versa. Cette théorie est soutenue par bien des auteurs, qui se servent de cette explication, pour prôner l'importance de la thérapeutique en calcium chez l'adulte. Rose, dans son volume sur la nutrition, nous parle, au chapitre traitant de la vitamine C, de la résorption de la racine des dents dans les cas d'avitaminoses. Le Dr Julien D. Boyd prétend qu'une diète, riche en sels minéraux et bien balancée, peut produire une dentine aussi dure qu'une porcelaine, et qu'elle le demeurera aussi longtemps que cette même diète sera maintenue.

Bodecker (8), dans un article paru dans le Dental Cosmos, en 1929, prétend que les odontoblastes secrètent certains éléments du sang, qui après avoir traversé la dentine, pénètrent jusqu'à l'émail. "Ce matériel, affirme-t-il, accroît la densité de la dentine et de l'émail par la déposition de sels calcaires."

Gies et Heft (9) ont donné une injection intrapéritonéale de jus de thyman à des rats, des lapins et des chiens; ils ont constaté que cette substance se rendait facilement jusqu'à l'émail des dents en voie de formation et semblait y demeurer indéfiniment, mais ne pénétrait pas jusqu'à l'émail des dents déjà formées.

Ajoutons pour terminer, qu'un anglais, du nom de Fish (10), a rapporté, en 1932, avoir expérimenté la perméabilité de la dentine et de l'émail sur des chiens, des singes et des humains, en déposant différentes substances dans la chambre pulpaire, après l'éruption de leurs dents. Maxwell Karshan (11) qui note cette expérience, ajoute que les dents de chiens sont plus perméables que celles des humains; et que cette perméabilité décroît avec l'âge.

CONCLUSION.—De tout ce qui précède, je crois que nous pouvons tirer les conclusions suivantes: 1) Au stage de sa formation, la dent est très sensible aux troubles organiques; les maladies à haute température, l'hyper ou l'hypo-fonction des glandes endocrines et la malnutrition peuvent causer une diminution, souvent très marquée, dans la calcification de l'émail et de la dentine; anomalie, qui rend la dent plus susceptible à la carie, après son éruption sur la gencive.

2) Comme toutes les dents temporaires, et même quelques dents permanentes, commencent à se former durant la grossesse, une diète bien balancée, à la femme enceinte, est de nature à procurer à son futur enfant, une dentition forte et solide, qui résistera d'avantage à la carie dentaire.

3) Les dents temporaires (jusqu'à l'âge de 3 ans) et toutes les dents permanentes, continuent à se former après la naissance et c'est pendant cette période que la diète a le plus d'influence sur la calcification des dents.

4) Les expériences ont démontré que la résorption et l'absorption secondaire des sels minéraux, dans l'émail et la dentine, est, pour le moins, minime, même pendant la formation de la dent; voilà pourquoi le manque de calcification, pendant cette période, est si néfaste à la dentition.

5) Après son éruption sur la gencive, la couronne de la dent (l'émail et la dentine) semble devenir très peu sensible à l'absorption et à la résorption des sels minéraux. C'est la raison pour laquelle, plusieurs auteurs prétendent que la diète a très peu d'effets, contre la carie dentaire, chez l'adulte.

II

La dent possède une haute structure organique; l'émail, bien formé, contient environ 95% de sels minéraux; la dentine et le ciment approximativement 70%. Or il ne se fait pas de création dans le phénomène de l'absorption intestinale, il y a transformation de la matière absorbée, sans en changer la nature. Il est reconnu depuis longtemps qu'il ne suffit pas de manger à sa faim, pour satisfaire à tous les besoins du corps humain; il faut, de plus, que la nourriture, que l'on mange, contienne tous les matériaux nécessaires à la formation et à la régénération de chacun des tissus en particulier. De même qu'il faut de la brique pour briquer une maison, ainsi les sels minéraux sont indispensables à la formation des dents.

Tous les matériaux nécessaires à une bonne diète, intéressent le dentiste; tous les nutritionnistes vous diront que, même en ce qui concerne la calcification osseuse ou dentaire le meilleur moyen d'obtenir de bons résultats, c'est par une diète bien, balancée. Tous les éléments nécessaires au métabolisme du corps humain s'entraînent les uns les autres; les gras sont les véhicules des vitamines A, D, et E. Le calcium coordonne les autres sels minéraux dans l'organisme, etc.

Les éléments nutritifs sont 1) les éléments, dits caloriques (les protéines, les gras et les hydrocarbonnés); 2) les sels minéraux; 3) les vitamines.

Quelques mots, seulement, sur les éléments du premier groupe.

Les protéines.—Les fonctions principales des protéines sont: production d'énergie, d'hormones et d'enzymes; construction des tissus. C'est l'élément le plus largement distribué dans l'organisme.

Rapport des protéines avec la carie.—Est-ce que les protéines ont un rapport

quelconque avec la carie dentaire? Différentes recherches ont été poursuivies dans ce domaine; en voici quelques unes.

Fleming (12) prétend qu'une diète pauvre en hydrocarbonnés et riche en protéines a pour effet de diminuer le nombre des microbes aciduriques dans la salive. Il ne dit pas, cependant, si cette diminution des lactobacilles est due à la réduction du CHO, ou à l'action protectrice des protéines. Jay (13), dans une étude semblable, semble croire à l'influence immunisatrice des protéines. Un autre auteur, Wallace (14) de Londres, est d'avis que le caractère fibreux des protéines empêche les aliments de se loger dans les sillons et les interstices des dents, et par le fait même, protège celles-ci contre la carie.

Rosebery, Karshan et Foley (15) après avoir provoqué une décalcification prononcée, sur des rats, en leur donnant seulement du riz comme nourriture, ont, entre autres expériences, ajouté une quantité égale de protéines et de sels à leur diète; ils ont constaté un changement appréciable dans la structure des dents.

Le contenu en protéine dans la salive, le sang et les dents, a été analysé, chez les susceptibles et les non-susceptibles à la carie afin de s'assurer s'il n'existait pas de différence entre les deux groupes; mais les expériences n'ont pas donné de résultats dignes de mention. Cependant d'après Karshan, Weiner et Stofsky (16), la quantité de protéines, contenues dans la salive, ne serait pas la même où il y a des dents cariées ou des dents saines; 0.27% dans le premier cas et 0.37% environ dans le dernier.

Les Gras.—Leurs fonctions sont: Production et emmagasinage d'énergie; véhicule des vitamines A, D, E. Les sources principales sont; le lait, le beurre et les viandes.

Leurs rapports avec la carie ont été étudiés sous différents angles mais tous ont été négatifs, ou à peu près. Ils jouent, cependant, un rôle indirect, important, dans la calcification. Nous avons dit que les gras étaient les véhicules des vitamines A, D, E. De plus l'irradiation de certains de ses composés (Ergostérol) pro-

duit de la vitamine D concentrée, telle que le viostérol, le calciférol, etc.

Les Hydrocarbonnés.—Sont les plus grands producteurs d'énergie de l'organisme. Leurs principales sources sont: les céréales, les sucres et les légumes.

Rapport avec la carie.—Le bacille acidophilus, contenu dans la salive, produit, au contact des hydrocarbonnés, la multiplication de ce microbe, multiplication, qui a pour effet de produire une fermentation (l'acide lactique) qui abaisse le PH salivaire à un degré qui cause la carie. C'est la théorie de Miller.

Bunting (17), et d'autres auteurs aussi, ont prouvé qu'ils pouvaient, dans un laps de temps très court (48 hrs), abaisser le PH salivaire à un degré susceptible de produire la carie sur les dents en donnant à leurs patients des aliments riches en pâtes alimentaires et en sucres raffinés.

Osborn (18), prétend que la canne à sucre et les céréales à grain entier, bien qu'ils soient susceptibles de fermenter au contact de la salive, produisent moins de carie que les produits raffinés. Cette différence serait-elle due au procédé de raffinerie? Osborn se pose la question, sans donner d'explication.

Les Sels Minéraux.—Tous les sels minéraux, qui composent le corps humain, excepté le calcium, le phosphore, le fer et l'iode, sont contenus en grande quantité dans les aliments; il n'est pas nécessaire d'y apporter une attention particulière dans la diète quotidienne. Comme le fer et l'iode n'ont qu'une relation secondaire avec la calcification des dents, deux principaux sels; le calcium et le phosphore seront étudiés.

Le Calcium.—Le calcium joue plusieurs rôles essentiels dans le métabolisme du corps, rôles, que nous résumerons ainsi:

- 1) Nécessaire au fonctionnement normal du coeur.
- 2) Élément essentiel à la coagulation du sang.
- 3) Contrôle la contractibilité musculaire.
- 4) Stimule le système nerveux.
- 5) Influence la croissance de certains organes.

6) Coordonne les autres sels minéraux dans l'organisme.

7) Constitue l'élément essentiel des os et des dents.

Sources.—Une grande variété d'aliments sont pourvus de calcium, mais ces principales sources sont: le lait et le fromage.

La quantité requise varie avec l'âge et la pesanteur de chaque individu. D'après Rose et Chaney (19), un adulte, pesant environ 150 lbs, consomme 0.8 gr. de calcium par jour.

Une femme enceinte consommera près de 1.5 gr.

Une femme qui nourrit consommera près de 2 gr.

Un enfant de 10 à 12 ans consommera près 1.5 gr.

Un enfant de 7 à 9 ans consommera près de 1.2 gr.

Un enfant de 4 à 6 ans consommera près 1 gr.

En nous basant sur l'opinion de différents auteurs, je crois que nous pouvons dire qu'un adulte normal, absorbe, dans une diète bien balancée, environ les 2/3 de sa ration journalière, au 0.5 gr. de calcium, dans les différents aliments qu'il mange; et comme une pinte de lait contient près de 1.5 gr. de calcium, il est donc recommandé à un adulte, de boire avec les autres aliments, une chopine de lait tous les jours, ou son équivalent en fromage (environ 1 pc. carré). En se basant sur le même calcul, une femme enceinte ou une nourrice une chopine et demie, environ 1 pinte; la même quantité à un enfant de 10 ans; à celui de 7 ou 8 ans et enfin 1 chopine s'il a 4 ans ou moins.

J'ai noté ce qui suit dans Shermann (20) "If every child got a quart of milk, and every man a pint daily, with reasonably good selection of food for the rest of the diet, all the calcium and phosphorus requirements of normal nutrition would be met."

Relation du calcium avec la carie.—Vous admettez tous qu'une dent, bien calcifiée, résiste d'avantage à la carie; comme elle est composée presque exclusivement de tissu dur, il est logique de conclure que le calcium est très important, surtout durant la période de formation des dents.

Or nous savons que la calcification dentaire débute avant que l'enfant naisse, et qu'elle se continue après sa naissance, jusqu'à l'adolescence. Il est très important que l'enfant absorbe, durant ces trois périodes de la vie, une très grande quantité de sels minéraux.

Étudions quelque peu, l'importance du calcium à chacune de ces périodes;

Est-ce que le fait de prescrire du calcium à une femme enceinte, peut donner de meilleurs dents à son enfant? C'est une question, qui nous est posée très souvent.

L'exigence en calcium, chez la femme enceinte, est très grande; car, en plus de son besoin quotidien, elle doit pourvoir à la formation osseuse du fœtus; il y a danger de déficience dans son cas, mais d'après plusieurs auteurs, ce déficit affecte beaucoup plus la mère que le fœtus.

La quantité de calcium, dans le sang, demeure toujours constante, et elle demeurera ainsi, aussi longtemps que la réserve (dans les os) n'aura pas été épuisée par des troubles endocriniens, surtout celui de la parathyroïde, ou encore par une avitaminose D; nous en parlerons un peu plus loin.

Le fœtus reçoit donc, dans tous les cas normaux, sa quantité requise, même s'il doit puiser dans la réserve maternelle; et des troubles sérieux apparaîtront chez cette dernière, avant qu'il n'affecte l'enfant.

Ce qui semble prouvé, en tout cas, c'est que quand une femme a une diète appropriée à son état, le fait de lui prescrire du calcium, en comprimés ou autrement, ne peut avoir aucun effet additionnel sur la calcification des dents de son enfant.

Alfred F. Hess (21) a fait une étude microscopique et chimique, sur des dents de plusieurs fœtus et les résultats qu'il a constatés sont les suivants: "1) Calcification must be regarded as a post-natal phenomenon. 2) At birth, only 0.5 gr. of tricalcium phosphate had been laid

down in the teeth of both jaws. 3) As far as the teeth of the infant are concerned, it cannot be of great moment whether throughout pregnancy, a woman has a diet high in calcium and phosphorus. 4) The post-natal period is of great significance in regard to calcium and phosphorus for teeth. 5) Little is to be gained by increasing the calcium and phosphorus intake of the expectant mother."

Le bébé, qui se nourrit presque exclusivement que de lait, reçoit, pendant la période d'allaitement, la quantité de calcium requise par sa croissance.

Le danger de déficit commence à ce manifester et augmentera à mesure que l'enfant diminuera le lait pour une nourriture plus variée. C'est alors, surtout, qu'il devient très important de voir à ce qu'il reçoive le quantité de calcium requise; et ceci non seulement, pendant quelques mois, et même quelques années, mais durant toute son enfance et même son adolescence.

Nous avons discuté, au chapitre précédent, de l'importance de la thérapeutique du calcium chez l'adulte.

Le calcium et le phosphore, contenus dans la salive, ont-ils un rapport quelconque avec la carie dentaire? Price et Horton (22) ont fait l'analyse de la salive de plusieurs enfants; sur 82 non-susceptibles, ils ont constaté que 49 avaient plus que 8 mg. de calcium par 100 cc. de salive; sur 159 susceptibles, seulement 25 avaient plus que 8 mg. par 100 cc. Ces deux auteurs prétendent que la diminution de calcium ne précède pas la carie, mais l'accompagne et probablement vient après elle.

Bunting (23) a prescrit à des enfants et des adultes, 3 gr. de Ca par jour, sous forme de comprimés, et ceci pendant 2 semaines. L'analyse de la salive, avant et après l'expérience, n'a donné aucun changement appréciable. Marrell, Clark (24) Shell (25) et plusieurs autres, ont obtenu à peu près le même résultat.

(à suivre)





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397 est Boul. S.-Joseph, Montréal

Les bienfaits d'une bibliothèque

De tous temps, les bibliothèques ont été établies pour conserver les données du savoir humain. Sous tous les régimes politiques, au sein de toutes les civilisations, à toutes les époques de l'histoire, le législateur et l'homme de science ont eu le grand souci d'amasser dans des locaux, à l'abri des éléments destructeurs, la somme des connaissances écrites pour l'usage des générations suivantes.

Nous ne sommes pas bibliothécaire et d'autres, plus versés dans l'art de la conservation des livres, pourraient épiloguer avec plus de compétence, de facilité et d'amour, sur les avantages d'une collection complète et variée de volumes et de revues, remplis de travaux anciens et contemporains.

Nous sommes seulement intéressé à la littérature dentaire, aux publications, qui se font, dans plusieurs langues, tant sous forme de volumes que sous forme de journaux ou de revues. Nous nous rendons compte de la source de documentation incomparable que ces écrits offrent aux étudiants, qui veulent rédiger des thèses ou préparer des "seminars" et aux praticiens, qui veulent étudier un aspect de notre domaine, pour leur renseignement personnel ou pour en faire profiter leurs confrères.

Nous savons, de plus, que la faculté de Chirurgie Dentaire de l'Université de Montréal possède, dans sa bibliothèque particulière, des trésors inestimables, au point de vue volumes et collections complètes de revues dentaires.

La faculté de Chirurgie Dentaire reçoit régulièrement plus de cinquante revues dentaires, publiées en langues française, anglaise, espagnole, portugaise, polonaise, etc. Elle consacre une somme, chaque année, à l'entretien de ces périodiques (reliure, etc.) et à l'achat de nouveaux volumes.

Les étudiants et les professeurs profitent de ces bénéfices uniques pour l'amélioration de l'enseignement et des cours, mais les praticiens, sortis de l'Université, ne peuvent actuellement bénéficier et n'ont pas accès à cette bibliothèque spécialisée.

Il serait facile, avec un peu d'organisation et de travail, de faire tirer profit aux dentistes de la Province de Québec, de cette source de renseignements bibliographiques.

Le Collège des Dentistes pourrait aider la faculté à défrayer le salaire d'un ou d'une bibliothécaire, qui répondrait aux demandes de renseignements des dentistes ou qui établirait un genre de bibliothèque circulante, sur le modèle de celles, qui existent déjà. Car il est un fait patent, indéniable: c'est que le dentiste ne lit pas, ou presque pas, les publications dentaires, par manque de temps ou de facilités. La corporation des dentistes devrait nommer un dentiste qualifié pour parcourir la littérature dentaire et éclairer ses confrères dans le choix de leurs lectures.

A notre sens, le projet mériterait d'être étudié et mis en acte, en tenant compte des modalités de circonstances et des disponibilités.

En attendant la réalisation de ce dessein, nous serions heureux de recevoir l'expression des sentiments des dentistes en face de cette suggestion; nous pourrions ouvrir une colonne pour publier les réactions des dentistes sur cette question. Depuis quelque temps, la bibliothèque de la faculté de Chirurgie Dentaire reçoit avec reconnaissance tous les envois de publications, anciennes ou récentes, de la part des dentistes, qui désirent se ménager de l'espace, en aidant à compléter des séries de revues et de livres dentaires.

GERARD DE MONTIGNY.

FACULTÉ DE CHIRURGIE DENTAIRE, COURS POST-SCOLAIRES 1947-1948

ENDROITS	CHIRURGIE	ENDODONTIE	ORTHODONTIE	PROTHESE
Québec.....	12	13	7	5
Ontario.....	4	—	6	—
Manitoba ..	—	—	1	—
Alberta.....	—	—	1	—
Colombie Brit ..	—	—	2	—
Nouvelle-Ecosse.....	1	—	—	—
Etats-Unis	—	—	30	—
Haiti.....	1	—	—	—
TOTAL.....	18	13	47	5

Quatre-vingt-trois (83) élèves ont suivi ces cours.

Dans le monde dentaire

Statistiques sur le nombre des dentistes

L'enquête annuelle sur le nombre des dentistes canadiens vient d'être publiée, en sept tableaux, par le Secrétariat de l'Association Dentaire Canadienne. Ces compilations sont faites chaque année, depuis 1943. En comparant les chiffres de chaque année, on se rend compte de changements, qui sont des indices de tendances significatives.

Il est difficile d'obtenir des données précises sur le nombre des dentistes pour les années précédant 1943. Le rapport du docteur Gies, publié en 1926, sous les auspices de la Carnegie Foundation, donne des statistiques pour chaque province, en établissant le nombre des dentistes et ses proportions avec la population de ces provinces respectives. Les chiffres alignés ont été compilés entre les années 1922 et 1925. On a tenté de contrôler ces chiffres, qui paraissent assez justes, à une ou deux exceptions près. Les statistiques du rapport Gies sont les suivantes:

En comparant cette compilation avec les chiffres du 2 janvier 1948, alignés dans le tableau No 1, on constate des choses intéressantes. La population du Canada, fixée par le Bureau des Statistiques du Canada, pour 1946, est de 12,307,000, une augmentation approximative du tiers, depuis 1924-25. Ce qui nous intéresse le plus, c'est la baisse de la proportion des dentistes en rapport avec la population: 1:2510 à 1:2735. En autres mots, l'augmentation du nombre des dentistes n'a pas suivi celle de la population, durant les deux dernières décades. Cette constatation est intéressante.

En étudiant les chiffres pour chaque province, on remarque que la province de Québec a fait des gains considérables en améliorant sa proportion de dentistes en rapport à la population. Dans six pro-

vinces, à savoir, Nouvelle-Ecosse, Nouveau-Brunswick, Ontario, Manitoba, Saskatchewan et Colombie Britannique, cette proportion a baissé et dans trois provinces, Ile-du-Prince-Edouard, Québec et Alberta, elle s'est améliorée. Les raisons de ce changement ne sont pas les mêmes dans chaque province. Les totaux comparés de la population canadienne du Bureau des Statistiques pour les années 1925 et 1946 apparaissent plus bas.

On notera que dans la Colombie Britannique, la population s'est développée rapidement et que la proportion des dentistes en rapport avec la population est tombée de 1:1920 à 1:2250. Tandis qu'en Alberta, avec un accroissement moindre de population, la proportion s'est améliorée de 1:3226 à 1:3022. La Saskatchewan, avec peu de modification dans le nombre de sa population, a moins de dentistes et par conséquent un chiffre plus considérable d'individus par dentiste qu'en 1925. Des remarques semblables peuvent se faire dans chacune des autres provinces.

Peu de changements se sont produits dans les statistiques de cette année, en comparaison de celles de l'année dernière.

Les retraits sont plus nombreux qu'en aucune autre année et cette situation est le résultat de dentistes d'âge avancé, qui ont continué leur pratique jusqu'à la fin de l'état d'urgence créé par la guerre. Le nombre total de 4601 représente une unité de moins que l'an dernier. Il est prévu que cette année ne verra pas d'augmentation notable dans le nombre des dentistes parce qu'une des plus grandes écoles n'aura pas de diplômés, en 1948, (à cause de la fin de l'accélération des cours, dans cette école). Les années, qui suivront 1948, donneront plus de nouveaux dentistes, à cause des classes nombreuses, qui sont actuellement aux études.

Les tableaux II, III, IV, et V parlent par eux-mêmes.

TABLEAU NO 1

Nombre de dentistes au Canada

(rapportés par les Régistres des provinces, le 2 janvier 1948)

Province	Nombre de dentistes			Durant 1947				Augmen- tation ou diminu- tion	Proportion des dentistes en rapport avec la population
	Hommes	Femmes	Total	Morts	Retraits	Changement de localité	Addi- tion		
Ile-du- Pr. Ed.....	28	0	28	0	1	0	1	-2	1/3357
Nouvelle- Ecosse.....	191	1	192	1	0	2	8	+23	1/3234
Nouv.- Brunswick	108	0	108	3	1	1	5	-2	1/4546
Québec.....	1,053	6	1,059	16	13	0	47	+185	1/3505
Ontario.....	2,009	23	2,032	25	36	45	57	+100	1/2062
Manitoba	250	1	251	3	2	2	9	0	1,2960
Saskat- chewan.....	194	1	195	1	1	1	10	-15	1/4318
Alberta.....	271	1	272	0	0	3	10	+36	1/3022
Colombie Britan.....	461	3	464	7	7	5	28	+102	1/2250
Total.....	4,565	36	4,601	56	61	59	175	+427	1/2735

Les chiffres des populations sont ceux fournis par le Bureau Fédéral des Statistiques pour l'année 1947.

Les chiffres d'augmentation ou de diminution sont donnés en comparaison de ceux de l'année 1938, année d'avant-guerre.

TABLEAU NO 2

Migration des dentistes canadiens durant 1947

Origine: Destination:—	I.-P.-E.	N.-E.	N.-B.	Qué.	Ont.	Man.	Sask.	Alb.	C.-B.	Gr. Bret.	Etats- Unis	Incon- nu
I.-du Prince- Edouard												
Nouvelle- Ecosse.....			1		1							
Nouveau- Brunswick.....							1					
Québec.....												
Ontario.....		2	1			10	5	3	21	1	2	
Manitoba.....					1			1				
Saskatchewan.....					1							
Alberta.....									3			
Colombie Britannique.....				1							3	1

TABLEAU NO 3

Nombre de dentistes pratiquant une spécialité
(seulement ceux, qui consacrent tout leur temps à cette spécialité)

	I. du Pr.-Ed.	N.-E.	N.-B.	Qué.	Ont.	Man.	Sask.	Alb.	C.-B.	Total
Chirurgie buccale.....	0	1	0	2	24	4	0	1	2	34
Orthodontie.....	0	1	0	13	20	3	0	2	4	43
Périodontie.....	0	0	0	2	11	1	0	1	3	18
Pédodontie.....	0	0	0	0	1	0	0	0	1	2
TOTAL.....	0	2	0	17	56	8	0	4	10	97

TABLEAU NO 4

Nombre de dentistes à l'emploi des services de santé provinciaux

	I. du-Pr. Ed.	N.-E.	N.-B.	Qué.	Ont.	Man.	Sask.	A. lb	C.-B.	Total
Universités: (enseignement)										
Plein-temps.....	0	1	0	6	6	0	0	1	0	14
Demi-temps.....	0	0	0	15	8	0	0	6	0	29
Hôpitaux:										
Plein-temps.....	0	2	0	0	18	1	1	3	1	26
Demi-temps.....	0	0	0	0	4	0	0	0	1	5
Comm. scolaires										
Plein-temps.....	0	1	1	15	11	1	1	4	9	43
Demi-temps.....	0	1	2	4	45	4	1	0	0	57
Santé publique:										
Plein-temps.....	0	0	2	0	5	1	3	0	0	11
Demi-temps.....	0	0	0	33	0	0	0	0	0	33

TABLEAU NO 5

Nombre total des dentistes à l'emploi des services fédéraux
(au 2 janvier 1948)

Ministère des Affaires des Vétérans.....	67
Ministère de la Défense Nationale.....	57
Ministère de la Santé et du Bien-Être National.....	3
Total.....	127

TABLEAU NO 6

Population du Canada

	1925	1946
Ile-du-Prince-Edouard.....	86,000	94,000
Nouvelle-Ecosse.....	515,000	612,000
Nouveau-Brunswick.....	393,000	480,000
Québec.....	2,549,000	3,630,000
Ontario.....	3,111,000	4,107,000
Manitoba.....	632,000	727,000
Saskatchewan.....	806,000	830,000
Alberta.....	602,000	800,000
Colombie Britannique.....	588,000	1,003,000
TOTAL.....	9,294,000	12,307,000

TABLEAU NO 7

Proportion des dentistes à la population

Province	Nombre des dentistes	Proportion des dentistes avec la population
Ile-du-Prince-Edouard.....	24	1:3638
Nouvelle-Ecosse.....	177	1:3033
Nouveau-Brunswick.....	167	1:2415*
Québec.....	609	1:4138
Ontario.....	1,782	1:1741
Manitoba.....	237	1:2770
Saskatchewan.....	236	1:3530
Alberta.....	202	1:3226
Colombie Britannique.....	292	1:1920
TOTAL.....	3,726	1:2510

*A notre avis, les chiffres fournis quant au nombre des dentistes au Nouveau-Brunswick est trop élevé; d'autre part les chiffres sont à peu près exacts pour les années 1924-1925.

Congrès de la Malbaie

Le président du Comité du Programme a présenté les derniers arrangements pris en marge du Congrès de Murray Bay, qui aura lieu du 20 au 24 juin 1948. Après avoir étudié chaque item du rapport, le Comité l'a approuvé.

Représentant officiel de l'A.D.C. pour la réunion de l'Association Dentaire Britannique

Une invitation chaleureuse fut reçue de l'Association Dentaire Britannique pour l'envoi d'un représentant officiel de l'A.D.C., au Congrès annuel de cette association, qui aura lieu, à Liverpool, du 8 au 12 juillet 1948.

On a décidé de nommer un délégué officiel, prochainement.

Réunion générale pour 1949 et 1950

Il a été officiellement décidé que la réunion annuelle pour 1949 aura lieu, à Saskatoon, en juin. Une invitation a été reçue de l'Association Dentaire de l'Ontario pour que l'A.D.C. tienne son Congrès annuel, en 1950, à Toronto, durant le mois de mai. Cette invitation a été acceptée.

Impôt sur le revenu des dentistes à salaire

Le Ministère du Revenu National nous apprend que: "Les dentistes, dont le revenu provient de salaires, peuvent déduire de leur revenue les sommes, qu'ils doivent déboursier, pour leur cotisation de licence, dans leur rapport pour l'année 1947."

Code national du travail

Il y a un an, le gouvernement fédéral étudiait un projet de loi intitulé. Loi d'Enquête sur les Controverses et des Relations Industrielles. Par cette loi, les médecins et les dentistes, à l'emploi de compagnies industrielles ou autres, devaient se soumettre aux règlements des unions ouvrières reconnues par leurs employeurs.

L'Association Dentaire Canadienne et d'autres organismes professionnels nationaux avaient fait entendre des protestations, à l'occasion de la discussion de ce projet de loi. La loi amendée vient d'être soumise aux députés (6 avril 1948) et dans la section 2 (i) on peut voir clairement statué que les professions médicale, dentaire, d'architectes, d'ingénieurs et d'avocats ne tombent pas sous le coup de cette loi.





Photo by Clifford R. Kopas, Bella Coola, British Columbia
courtesy of the Editor of *"The Beaver"*.

TOTEM IN BRITISH COLUMBIA

In the box on top of this moss-grown grave totem was the corpse of a child. In the background are the buildings of the Hudson's Bay post at Bella Coola, some of which still stand.





A. R. POAG, D.D.S., Hamilton, Ontario
President of Ontario Dental Association

Graduate of University of Toronto (Dentistry) 1919.

Past President of Hamilton Dental Society.

Served with O.T.C. and C.A.D.C. World War I.

Past Chairman of National Convention of Kinsmen Clubs.

Director of the Hamilton Senior Chamber of Commerce.

Member of the Staff and Past Chief of Dental Services,
Hamilton General Hospital.



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NO. 7

DENTAL TREATMENT PLAN FOR PENSIONERS

by R. A. ROONEY, D.D.S., Edmonton, Alberta

RELIABLE data on the costs of dental treatment for all age groups residing over large areas and based on private office practice and a fixed fee schedule as distinct from clinical or institutional operations, are scarce and hard to get.

Since any such statistics, data or other pertinent information is always of interest to the executives of the health professions charged with the responsibility for assuring an equitable arrangement for the professions concerned, it seemed that information on a plan which has been working very satisfactorily in Alberta since June 1st, 1947, should be of interest to and serve a useful purpose for those dental bodies dealing with any similar problem.

Under an agreement between the Bureau of Public Health of the Provincial Government and the Board of the Alberta Dental Association, free dental services have been made available to all pensioners of the government and their dependents; these remain such up to their eighteenth birthday. The unique feature of the plan and the one which will command the attention of dental and medical bodies, is that the Board controls all administration and treatment — the government merely supplying the money for the services by way of a per capita grant; the Board rendering a report on operations at stated inter-

vals. Similar arrangements for complete medical, surgical and hospital services for these pensioners are in effect between the government and the College of Physicians and Surgeons of the Province—the College also controlling administration and treatment. The hospitalization authorization required, originally, merely presentation of the authorization card for admittance but this had to be modified to be dependent on a doctor's certificate since it was found that old age pensioners needed little encouragement to demand, with or without real cause, the comforts and conveniences of hospitals and were cluttering the facilities of already over taxed institutions.

There are something over 20,000 pensioners and dependents in three groups, old age, blind and widows' allowance, while the grant is twenty-five cents (25c) per capita per month with an added one and one-quarter cents (1¼c) for administrative costs. This amount is not based on any data or statistics but solely on the basis of the sum the government was prepared to allot arbitrarily for institution of the plan. The following is a typical monthly statement of numbers of pension recipients as issued monthly to the Board by the provincial auditor. The numbers will vary one hundred or more, plus or minus, per month due to additions and deletions.

Old Age Pensioners	13,704
Spouses	1,682
Dependent Children	196
<i>Total</i>	<u>15,582</u>
Blind Pensioners	327
Spouses	91
Dependent Children	65
<i>Total</i>	<u>483</u>
Mothers Allowance Pension- ers	1,370
Dependent Children	3,292
<i>Total</i>	<u>4,662</u>
<i>Overall Total</i>	<u>20,727</u>

In practice, administration has been cut down to bare requirements, practically to a patient and dentist relation, a considerable item when compared to governmental bureau operations. Costs are kept to a minimum and tempers are not strained by departmental delay and red tape. Service and payment are immediate and the government is relieved of responsibility—much to the chagrin of some bureaucratic officials, it should be noted. One man, formerly with D.V.A. dental division, operates the administrative office.

Since no reliable data were available on the costs of such services, the Board decided to feel its way along and, to begin with, on consent of the government, decided to limit the services to full operative treatment for all pensioners and dependents, including extractions and denture relines. At the end of the first three month period, it was found that less than one-half the grant was being used so service was stepped up to include partial removable and anterior fixed dentures and minor orthodontic treatment.

A further seven month trial period still showed an accruing surplus so service was extended to include all treatment except major orthodontics but with one proviso: the Board would be responsible for only one-half the fee for full dentures, this being decided upon to preclude the possi-

bility of full denture wearers suddenly deciding they all needed new dentures. The dentist may make what arrangements he pleases with the patient for the remaining half. It is hoped that the part of the cost borne by the Board may be increased soon—depending entirely upon how the grant covers the service or whether the grant is increased.

The procedure has been simplified to the greatest possible degree. The government issued a numbered authorization card to each pensioner, also covering dependents, entitling them to free services. This is presented to the dentist of choice, who makes the examination, charts the proposed treatment on a prepared, numbered form and forwards this to the Administrative Office where the entitlement is checked against a master file (which is, in turn, checked against a certified list of beneficiaries, showing additions or deletions, from the provincial auditor each month) and the allotted fees noted. This is returned to the dentist who, on completion of treatment, again forwards the card, signed by himself and the patient, to the Administrative Office, where the chart is again checked and, if in order, payment made immediately. All operations are entered on a master chart which is retained in the Administrative Office and on which any subsequent operations will also be recorded, thus presenting a continuing picture of treatment, of particular value in the case of younger patients. For all partial dentures, removable or fixed, study models are required in order that need for treatment may be established and satisfactory design assured. Competent referees have been appointed who are on the staff of the dental faculty of the University of Alberta to decide any debatable case. This has proven to be an excellent precaution.

The astonishing feature is that in the first eight month period, only 1600 applications for treatment were received, while, with the modified full

denture authorization, as above, only a slightly higher ratio is being maintained.

To date, complaints about the service from any of the three groups concerned, government, beneficiaries and dentists, have been notable for their non-existence. Support of the dentists for the plan depends, naturally, on an acceptable fee, so the schedule approved by the federal government for the treatment of discharged service personnel, having proved satisfactory across the country, was adopted with certain upward revisions in the operative field.

There are renewed indications that the federal government is proceeding with its national health insurance plans but there is still no assurance that this will be more acceptable to provincial governments than in the past. In the meantime, all provincial governments have set up varying legislation of their own, differing in many particulars from the over-all federal suggestions. As it happens, the Alberta Government is an extremely forward looking body on health mat-

ters, having already established full, free treatment for tuberculosis, cancer, hospitalization for all maternity cases and limited treatment for other ills. It is the hope of the health professions in Alberta that this present arrangement may set a pattern for any future security plans, contributory or otherwise, that may be established in the province and that the professions then, having proved their efficiency, may retain this full control over administration as well as treatment.

Admittedly, the numbers involved in this experiment are probably not great enough to be authentic for full population coverage, yet all age groups from all sections of the province, urban and rural, are included so that the data may be assumed to be reasonably factual, enough so at least, that the Alberta Board would be willing to assume the same responsibility for the whole population of the province on the same basis.

In the preceding table will be found some figures that may prove of interest to professional executives

SUMMARY OF OPERATIONS FOR TEN MONTH PERIOD ENDING MARCH 31st.	
OLD AGE PENSIONERS (based on work completed):—	
Number 651 ..Amount, \$5760.00	Average cost per case ..\$ 8.85
Dependents of Old Age Pensioners:—	
Number 11 ..Amount, \$1625.00	Average cost per case ..\$14.64
MOTHERS ALLOWANCE PENSIONERS:—	
Number 272 ..Amount, \$4303.00	Average cost per case ..\$15.82
Dependents of Mothers Allowance Pensioners:—	
Number 674 Amount, \$10,094.00	Average cost per case ..\$14.98
BLIND PENSIONERS:—	
Number 16 ..Amount, \$ 143.00	Average cost per case ..\$ 8.94
Dependents of Blind Pensioners:—	
Number 16 ..Amount, \$ 285.00	Average cost per case ..\$17.81
TOTAL NUMBER OF COMPLETED CASES OF ALL TYPES	1740
TOTAL COST OF ALL TYPES OF COMPLETED CASES	\$22,191.00
AVERAGE COST PER CASE OVERALL	\$12.75
COST OF ADMINISTRATION FOR TEN MONTHS	\$3199.90
ADMINISTRATION COST PER CASE (based on the number of cases authorized)	\$1.51
DENTAL OPERATORS COST PER CASE	\$12.75
TOTAL COST PER CASE	\$14.26
NUMBER OF CASES OUTSTANDING	381
AMOUNT OF THE CASES OUTSTANDING	\$9202.00
AVERAGE COST PER CASE OUTSTANDING	\$24.15

considering any related arrangement. These would vary, of course, with the fee schedule in effect; hence the adoption of the D.V.A. schedule, based as it was on agreement with the Canadian Dental Association, proved by years of operations from coast to coast, which gives a sound foundation. Charts must be changed to permit the treatment for children but fees under the Alberta plan are the same as for adults. This means a better service where most necessary.

It should be noted that the cost per case in the cases outstanding has risen considerably. Most of these have been authorized during the two

months in which full denture authorization has been in effect, indicating the sharply increased cost for such service. It must be remembered though that this is a final charge, not a continuing liability as in other treatment. There is, however, a bigger variation in the entitlements in the old age groups due to deaths and additions, so full denture service will always be costly and must be regulated carefully. It has been found already that a considerable proportion of old people will not use the new dentures, preferring the old devil they do know to the new devil they don't know.

ANNOUNCEMENTS

Dental Public Health Bursaries

The Ontario Division of the Canadian Red Cross Society has made available funds to assist in the preparation of trained personnel for service in the dental public health field. Two bursaries, each of the value of \$500.00, are available for competition to those who seek admission to the course leading to the Diploma in Dental Public Health, during the 1948-49 session.

These bursaries will be awarded to two dental graduates who are Canadian citizens, on the basis of financial need, fitness for Dental Public Health Service and previous achievement.

While the last day for receiving applications for this course is announced as July 1 in the Calendar of the Faculty of Dentistry, applications will be received until September 1.

Further inquiries should be addressed to:

THE DEAN, *Faculty of Dentistry*
230 College St., Toronto, Ont.

Graduate Course in Orthodontics, Université de Montréal

The graduate course in Orthodontics, of one year duration, will begin on September 8, 1948.

As the number of candidates is limited to 15, the applications should be sent in as soon as possible. This one-year course is given in the English language.

Any information regarding this course and all applications should be made to:

DOCTOR PAUL GEOFFRION,
Vice-Dean and Head of the Orthodontic Department,
Université de Montréal,
2900 Mount-Royal Boulevard, Montreal 26, Que.

THE CEMENTOMA

by DR. GEORGE A. MORGAN, Toronto, Ontario

THE cementoma is a tumour type of dental anomaly, which has not been generally recognized. This form of odontome is of connective tissue origin, attached to the apex of a tooth, and it does not contain any dental structures other than cementum. Any one or more of the maxillary or mandibular teeth may be involved, although about 90 per cent of cementomas seem to be confined to the mandibular incisors. Mistaken diagnosis based on roentgenologic evidence depends largely on the stage of development at which the tumour may be when observed. In the incipient or primary stage, the pericemental membrane is thickened in the apical region and may resemble the thickening so often associated with traumatic occlusion, as illustrated in Fig. 1. With increase in size of the radiolucent area, the cementoma is prone to be confused with granuloma or dental root cyst. Tumours which have

reached a stage in development in which cementum is present in sufficient amounts to give radiopacity may be mistaken for regions of osteosclerosis, but are more often mistakenly diagnosed as calcified granulomas, as illustrated in Fig. 2.

Because of the more common occurrence of cementomas with mandibular incisors, radiolucent areas at the apices of these teeth should suggest the possibility that one is dealing with this type of growth; particularly is this true if one is dealing with vital teeth, if their colour is normal, and if there is no previous history of trauma, pain or pulpitis. Although it is almost certain that the tumour has its origin in the peridental membrane, it is likewise apparent that periapical infection does not play in its development. The pulp of the tooth affected invariably remains vital and healthy. The tumour is usually limited in growth and remains relatively



Fig. 1. — Cementoma primary stage involving the four mandibular incisor teeth. All teeth are normal to colour and vitality test.



Fig. 2. — Cementoma late stage involving the four mandibular incisor teeth. All teeth are normal to colour and vitality test. Note filling in of cementum.



Fig. 3 — Cementoma late stage involving the mandibular central incisors. Teeth are normal to colour and vitality test.

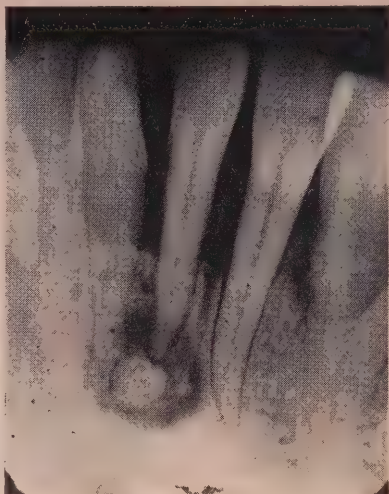


Fig. 4. — Cementoma involving pyorrhetically involved right central incisor. Tooth normal to colour and vitality test. Note advanced filling in of cementum.



Fig. 5. — Cementoma late stage involving mandibular bicuspid teeth. Teeth test vital and are normal in colour.



Fig. 6. — Cementoma late stage involving mesial root of first mandibular molar. Tooth normal to colour and vitality test.

small; therefore removal is rarely justifiable, particularly in cases where, to remove these tumours, healthy and vital teeth must be devitalized or sacrificed. Relief of ex-

cessive traumatic strain on the teeth involved is no doubt indicated.

Stafne, of the Mayo Clinic, in a large series of cases, (10,000 consecutive adult patients) found 24 cases of cementoma in which a total of 52 teeth were involved. Neither age nor sex are factors, although from reported cases, the tendency seems to be about 6 to 1 for the females. Prior to this examination, however, some of these patients may have had ce-



Fig. 7. — Cystic condition involving mandibular central incisors. Note difference in radiolucency of area as compared with cementoma. Note resorption of portion of root of right central. Teeth low in vitality test and not normal in colour.



Fig. 8. — Residual cysts of traumatic origin. Teeth are normal to colour and vitality test. Note difference in radiolucency of area as compared with cementoma.

mentomas removed on the assumption that they were granulomas, calcified or early radicular cysts. Then there are a few instances in which they remain very small and radiopacity varies so little from the surrounding bony process that roentgenographic diagnosis is uncertain. One can, therefore, assume that the incidence is at least 2 per 1,000 persons.

Cystic conditions can generally be differentiated by their definite outline, as illustrated in Fig. 8; areas of sclerotic bone by a difference in degree of radiolucency between them and that of a cementoma or root structure; hypercementosis by the fact that the area of hypercementosis involves

chiefly the root structure of the tooth above the apex, whereas the cementoma or pathological area is observed below the apex of the tooth.

SUMMARY AND CONCLUSIONS

The occurrence of cementoma in man is not an uncommon finding. The cementoma is rarely significant, only insofar as misinterpretations are made. The growth usually remains relatively small, the teeth affected invariably remain vital and removal is rarely justifiable, particularly if such removal involves the devitalization or loss of vital, healthy teeth.

170 ST. GEORGE STREET.

Without free speech no search for truth is possible; without free speech no discovery of truth is useful; without free speech progress is checked and the nations no longer march forward toward the nobler life which the future holds for man. Better a thousandfold abuse of free speech than denial of free speech. The abuse dies in a day, but the denial slays the life of the people, and entombs the hope of the race.

—Charles Bradlaugh.

100 THINGS A DENTIST MUST DO*

by Dr. GAYLORD JAMES, Cleveland, Ohio

A—FACTORS HAVING TO DO WITH HIMSELF

1. He must cultivate a liking for people.
2. He must be punctual.
3. He must be always thinking of his patients.
4. He must never let a patient feel that his work and welfare is not important to him.
5. His personal convenience is secondary to the patient's convenience.
6. His disposition at all times must be above reproach.
7. He must be interested. To him a trifle—to the patient a tragedy.
8. He must not develop careless habits about his office during business hours. (Reading sport pages, etc.)
9. He must practise the golden rule in respect to his fellow practitioners and his patients.
10. Cultivate the habit of success through persistence. (Marks of an Educated Man, Chapter 10.)
11. Defining his own ideals to himself as affects his accomplishments in such a manner as to live with them constantly.
12. Accomplish through honorable means rather than by any method which would lower self respect.
13. By being tolerant of the shortcomings of others.
14. By always trying to understand the motives of others.
15. He must be positive, not stubborn.
16. He must realize the necessity of his working when people in other fields of employment are not.
17. He cannot seclude himself from public contact.
18. He must base reasons on facts of dentistry which have been established; not upon hearsay, and figures of imagination.
19. He should not discuss one patient's shortcomings with another.
20. He should not criticize any patient to any person other than his wife or assistant. (In turn they must help him by allowing him to blow off steam and NOT repeat to others.)
21. He should take a vital interest in community affairs.
22. He should be broad minded in all of his contacts, seeking to eliminate personalities and individual dislikes from his judgment as related to community and professional affairs, or projects.
23. He needs to be enthusiastic both in living and in his approach to every problem. Cheerfulness breeds enthusiasm, success follows success because enthusiasm is contagious. We can use contagious enthusiasm for the purpose of building better practices.
24. An absorbing hobby is a fine sedative for any disposition but it should not become so absorbing that it will "black out" the ascending star of success.
25. When doing business with others, that is, receiving goods and services from them, let us act and approach them as we would like to have others receive our efforts, seeking to be fair and keeping our arrangements. This demands respect and furnishes contacts.
26. Build confidence by action not by promise. Confidence is a state of "feeling sure" or of "placing trust". We endanger the confidence of the referring source when a new patient finds us lacking in a particular respect.
27. He must prepare his patient for services he may elect to render by explanation, before time transposes and prospect into a definite need. If this is carried out, when the need is evident it will more

*Synopsis of Clinic presented before the Toronto Alumni Chapter, Alpha Omega Fraternity, Jan. 27, 1948.

easily be transformed into an immediate want.

FACTORS HAVING TO DO WITH HIS PATIENTS

28. A real appreciation of the value of the full mouth x-ray in all cases.
29. His proposals for mouth reconstruction must be clearly thought out and presented in a logical manner avoiding a stereotyped presentation which is delivered in all circumstances.
30. During such discussion if an informality is established the dentist will be rewarded by confidence from the patient which can be used to clinch his arguments.
31. It is advisable to present the best program of reconstruction which is possible for any particular case. The reasons may be given as, first, education of the patient to the best of procedures as applied to his particular case and the building up in his mind of a better appreciation of dental procedures in general.
32. When presenting a plan of restoration to a patient he must avoid the too enthusiastic approach which imitates the high pressure salesman.
33. Practical psychology is a necessary part of a dentist's knowledge. Let him use it on his patients to his own advantage but on himself for theirs. "Marks of an Educated Man" can be recommended. The practice of these "marks" will improve his life in many ways.
34. A reliable manner in handling children.
35. A certain portion of his work based upon percentage of the gross amount of dentistry produced can be segregated for needy cases deserving treatment. (Preference should be given to former patients who may be experiencing difficult times, e.g., widow with children who may have been able to pay medium fees when husband was alive and working.)

36. Ascertain the patients present appreciation of dental procedures and you can ascertain immediately your method of approach and be reasonably sure of the outcome.

FACTORS HAVING TO DO WITH OFFICE ADMINISTRATION

37. His office must be clean.
38. He must have an assistant.
39. He should spend some of his free time training her according to his own needs.
40. Appearance of the dentist and assistant at all times in office and out.
41. He must not get the reputation of breaking appointments to suit his own pleasure regardless.
42. He must make himself accessible.
43. He must keep adequate records of cases and services.
44. His statements must be sent promptly and correctly.
45. His correspondence must be concise, purposeful, and with an air of human understanding, thus in his absence presenting himself.
46. While in his office he must keep busy.
47. He must organize a recall system and see to it, it is used as a routine.
48. By setting up and working a depreciation account he assures his establishment against the treat of "not being modern".
49. His fee must have reasonable basis not by how much the traffic will bear.
50. By setting up a definite budget for any current year based upon figures of other years he assures himself of peace of mind in respect to finances.
51. A system for paying for dental services by the month.
52. Recording a charge for each service and discounting for various reasons will show him where his leaks are. He must realize his overhead cost is related to the gross amount of dentistry produced.
53. Suggested contacts with physi-

- cians give him a reputation for thoroughness.
54. Express his appreciation for a referred patient. (Phone call, letter, friendly greeting.)
 55. Estimate all cases thoroughly.
 56. On larger cases record conversations in writing for future reference and patient's understanding.
 57. Segregate personal affairs from office affairs.
 58. Pay himself a definite salary based upon average from the figures of other years.
 59. Know credit ratings on larger cases.
 60. He must keep any promise he makes a patient; for example telephone call or delivering a piece of work.
 61. He must budget his expenses. Office and personal.
 62. He must delegate responsibility to those helping him and then leave them alone.
 63. He must respect the value of time. For himself to keep busy, others not to be kept waiting.
 64. Notifying a practice of vacation periods is good form.
 65. Make financial agreements and keep them, do not simply "stall" work until patient catches up. If for any reason a patient is delinquent approach the matter in a business like way and tell them why you must hold up the work. Patient appreciates directness and may make better effort.
 66. When patient finishes payment schedule write a letter of appreciation.
 67. He should do well to include bite-wing x-rays with his prophylactic treatments at least once a year. (In this way he is fulfilling his duty to the patient and at the same time is relieving himself of criticism because of missing a carious area.)
 68. If his own time is not completely filled he must do a reasonable amount of his own laboratory work.
 69. He must analyze the location of his office in terms of the convenience of his clientele.
 70. Repairs must be made promptly on equipment.
 71. He should establish a supply cupboard and a want list so that necessary items are refilled automatically.
 72. He should buy in quantities thereby saving himself money.
 73. As pointed out, funds from depreciation account can be invested in tooth accounts, gold, and deposit accounts, at supply houses for the purpose of earning an income within the business.
 74. His fee schedule must consider the patient's ability to pay.
 75. Until his income can do so, he must finance himself in all of his activity within minimum limits, not on an extravagant basis. (Law of minimum limits.)
 76. His waiting room should be furnished in good taste and present his personality.
 77. He should seek to save time through a study of operating methods and eliminating lost motion.
 78. Those dentists who have built large practices and need help of several people must make these individuals a part of the office definitely. They must feel that they do not work for this dentist but WITH him. The one attitude is of clock watching, the other implies help and a willingness to assume a portion of the responsibility, for success or failure of a given effort.
 79. Discussion of office problems with his assistant helps him to clarify his thinking and makes her feel her part in the office affairs. In addition a competent assistant will study the dentist's solution and by adding to her experience be able to deal with similar situations routinely.
 80. Economies must not be instituted in the office which impair the

quality of the service.

81. The dentist must appreciate all factors of a sanitary routine in every department of his establishment. If he does not his return will be materially lessened since his fee schedule will reflect what he does not render in service. The quality and quantity is also damaged.
82. He must realize that if he does not appreciate and practice all the principles involved he cannot hope to demand the same fee as can those practitioners who are constantly on the alert.
83. The dental waiting room is a public place. While the dentist can choose those patients he prefers to work for he cannot control which persons will enter his waiting room. It is therefore important that in her role of receptionist the assistant be adroit, tactful, friendly, and courteous to all persons, who enter. (e.g. man with brief case.)
84. He must constantly search for facts in figures accumulated by his own staff based on the various procedures of that one establishment. Other men's figures are valuable for the purpose of comparison.
85. Let him definitely realize that satisfied patients are always his goal—his capital stocks and that their good-will is his most valuable asset in perpetuating his practice. (The advertiser must depend upon new patients—the ethical man literally stands upon his record.)
86. He should accumulate a "cash reserve" equal to two months gross cash income and never lessen this cash position.

FACTORS HAVING TO DO WITH HIS PROFESSION

87. He must read a general selection of the current dental literature.
88. He must be willing to give of himself to the advancement of his profession.

89. Do everything possible to develop the professional personality his ideal would have him be.
90. It is important that the teeth of his family, his assistant and himself bespeak good appearance and care.
91. He should be a member of a study group which has regular meetings and interested in the investigation of a particular phase of dentistry, (other than practice management).
92. He should be a member of local, state and national dental associations.
93. He should develop an ability to speak in public with confidence and convincingly.
94. A dentist must have pride in the profession he has affiliated with and made a career. In this manner he becomes a respected part of society at large.
95. Provide for his constant improvement by setting aside a small sum per month for intensive post-graduate work each five years.
96. He must read a general selection of literature to include current events, financial and fictional material. This makes him a well rounded person in a mixed group.

FACTORS HAVING TO DO WITH HIS RETIREMENT PROGRAM

97. His insurance account must be well rounded and protect everything it can.
98. He must organize a retirement program which by its establishment early in his productive years will become complete at an arbitrary age thereby lessening his responsibility as his physical energy is lessened.
99. His investment should not be speculative but rather of the "safe and sure" denomination. Examples: insurance, home owning, annuities, first grade bonds, well chosen common stocks.
100. He must always remember that, success is a continuous journey, never a destination.

THE USE OF ABSORBABLE HAEMOSTATS IN ORAL SURGERY

By D. H. MacDONALD, D.D.S., Toronto, Ontario

THE purpose of this article is to present briefly a description of some new materials which are being used in dental oral surgery. These products are more or less in the experimental stage so that the discussion is offered with an open mind and in some cases with reservations.

The absorbable haemostats have had a reasonably recent advent to the field of oral surgery, although they have proven their value in general surgery for several years. The two most useful products are Gelfoam and Oxygel. They are materials which can be placed in an open or closed wound and do not have to be removed. They control haemorrhage mechanically and by assisting in the preservation of the primary clot of blood they also control healing.

GELFOAM

Gelfoam is a sterile, pliable, nonantigenic, surgical sponge capable of absorbing and holding within its meshes many times its weight of whole blood. It is a specially prepared type of gelatine and is absorbable when left in contact with healing tissue. The haemostatic action is primarily mechanical since the sponge fills the socket and after saturation with blood, swells and exerts a gentle pressure upon capillary endings. The use of thrombin in conjunction with gelfoam produces a clot rapidly, but this will be dealt with later.

Before enumerating the indications of an absorbable haemostatic sponge, the general method of use will be described. Immediately following extraction, curettement and bone trimming if necessary, a piece of sponge is cut with sterile scissors approximately the size of the socket. This is carried to the socket and saturated with blood. The sponge is removed and squeezed between the fingers to expel air bubbles, then replaced in the socket. Suturing

if required is done and the patient is dismissed biting on a piece of ordinary gauze for about five minutes. The sponge does not have to be removed at a later sitting because it becomes part of the clot and later of the granulation. It helps to prevent the loss of the original blood clot and so assists in the prevention of empty or "dry" sockets. If some bone has been lost unavoidably during extraction, the sponge, by its swelling pressure tends to maintain the contour of the gingival tissue wall.

Gelfoam comes in a jar with several sponges about 2" x $\frac{3}{4}$ " x $\frac{1}{4}$ " each. The directions state that once the jar is opened the unused contents must be discarded because of possible contamination. This would prove very costly, and it is suggested that the following technique should not interfere with the ideal concept of sterility as far as it can be obtained in oral surgery. Remove the screw cap from the jar, and with sterile scissors cut a piece of sponge the desired size. Transfer with the scissor points or sterile pliers to the operating tray—replace the cap. In this way the sponges can be used for several days without further contamination than the air that has been admitted to the jar.

INDICATION OF GELFOAM

1. When the patient has had a history of prolonged primary or secondary haemorrhage following previous extractions.

In these cases, usually the gelfoam alone is sufficient to produce a normal clot that will not be disturbed, but if the history indicates a more complicated condition the sponge should be saturated with thrombin before insertion into the socket. This will produce an almost immediate normal clot. The introduction of thrombin hastens the clotting process and fibrin is very quickly formed.

2. Following extractions where there has been loss of the buccal or labial bone, it will help to prevent the extreme resorption which is a problem for prosthesis. This conservation is brought about by the gentle pressure of the expanded sponge upon the inner surface of the gingival tissues and periosteum.

3. Following multiple extractions where interseptal bone is very often exposed by the patient's tongue and healing is delayed, gelfoam will act as a pad over the exposed areas and promote more rapid healing.

4. Whenever an opening is made into the maxillary sinus, absorbable sponges will usually promote healing by first intention without the necessity of future operations to close a fistula into the oral cavity.

5. As a routine following all suppressed and impacted third molars and small cysts. Following the removal of a difficult impaction, formerly, it was considered the accepted treatment to place iodoform gauze at the time of operation and to change it regularly for two weeks or more. This meant a painful post-operative period and many visits to the office. Now the routine treatment is to place the absorbable sponge material, usually along with penicillin in a cone or tablet form, and to suture the wound in the normal manner. The patient is instructed that you are attempting to obtain healing by first intention but that it may be necessary to place dressings in the socket at a later date if the blood clot breaks down—usually in 48-56 hours. Naturally, with difficult impactions, it is impossible to obtain normal healing in all cases, but the author has noted that approximately four out of five of these heal by first intention and that no dressings are necessary. Routine examinations are carried out once or twice a week for two to three weeks providing there is no excessive pain and the original swelling has subsided satisfactorily. If the clot does break down after several days and it is necessary to place dressings, there is very little difficulty in entering the socket as the

sponge has prevented the gingival lip from caving into and healing over the surface of the socket.

The treatment of cysts up to about one centimeter diameter may be similar. After complete enucleation of the cyst lining, penicillin and absorbable sponge are placed in the cavity and the wound closed with sutures. Here again the results are not 100 per cent normal healing with the original blood clot, but the percentage is sufficiently high to prevent many after treatments in the majority of cases. These cases have been radiographed at intervals up to six months and bone regeneration has been normal.

6. In the treatment of secondary haemorrhage, haemostatic sponges are placed over the bleeding area having been previously saturated with thrombin. Pressure on a gauze pack over the sponge will usually stop the haemorrhage quite rapidly. A second application may be necessary if slight seepage persists.

OXYCEL

Oxycel is a prepared oxidized cellulose which comes in three forms useful in oral surgery. There is a cotton wool form, a square gauze-like pad, and a strip gauze. All of these are absorbable even though they have the appearance of ordinary gauze. The cotton wool type is probably the most practical in Dentistry as it can be easily applied to a socket. The gauze or strip gauze can be cut to desired size and placed either in or over a socket to unite with the blood clot. The indications for the use of oxycel are practically the same as those of gelfoam except that it can be used somewhat more satisfactory to cover interseptal bone in multiple extractions since it has more body to it. The haemostatic action is again more or less mechanical in that it absorbs blood and clings to the walls of the socket acting as a plug and a protector. The packaging of oxycel presents the same sterility problem as gelfoam but by again using sterile scissors and pliers it can be preserved and the remainder used. The material can not be autoclaved.

CONCLUSION

With absorbable haemostats we are entering a new phase of what might be termed "controlled healing" in oral surgery. We are performing surgery daily in a field which should produce infection in every tooth socket, according to normal surgical principles, and yet the majority of cases heal without complications. The time-tested method of leaving nature alone to heal normally is still very sage advice in the majority of cases, but certainly in the abnormal, the indications strongly favour an absorbable material which can assist the natural resources of the body. There are two possible uses of absorbable sponges which will deserve experimentation. These are merely suggestions with insufficient evidence to state results. The first is the use of a

sponge saturated with analgesics to be placed in dry sockets as a healing relief. The second is the saturation of a sponge with high potency penicillin in solution for use in lower third molar sockets where there has been an infected flap. Someone once said "Be not the first nor the last to try something new" and we should remember that when there are so many advances being made every few months. Let us try and use those materials in our practice which will assist in restoring dental health and prevent discomfort.

REFERENCES

- (1) W. Guralnick D.M.D.
Vol. 32 No. 12 Am. Journal of Ortho. and Oral Surg. Pages 792, 794 Dec. 1946.
- (2) J. T. Correll and Wise
Proc. Soc. Exper. Biol. & Med. 58: 233-235 March 1945.
- (3) L. Berg D.M.D.
Gelfoam in Dentistry. Dent. Items of Interest March 1947.

ANNOUNCEMENTS

Dental Faculty, University of Alberta Dedication Ceremony

Formal opening of the New Dental Clinic, Saturday, September 18. Followed by a two day program of clinics and lectures, Monday, September 20 and Tuesday September 21.

Eastern Ontario Dental Association

Ottawa on September 19, 20, 21. "Convention at Chateau Laurier Hotel

GEORGE W. BARRETT, D.D.S. *President*
793½ Bank St., Ottawa

I. F. CALDER, D.D.S., *Secretary*
Brockville, Ontario

Practice of Dental Medicine

Initial plans for the Fifth Annual Seminar for the Study and Practice of Dental Medicine to be held at the Desert Inn, Palm Springs, California, October 17-21, have been announced.

In view of the widespread interest in the topical application of fluoride which has rapidly reached epidemic proportions throughout the nation, this subject will be one of many to be critically discussed during the forthcoming Seminar.

Nine leading authorities in the fields of dental caries, inflammation, parodontosis, clinical oral pathology and experimental biology will submit papers and lectures during the special session this year.

Detailed information concerning attendance requisites for the Seminar may be secured by writing to Marion G. Lewis, Executive Secretary, 1618 Ninth Avenue, San Francisco 22, California.

ANNOUNCEMENTS

Northern Ontario Dental Association

Meeting at Haileybury, Saturday, September 11.

W. R. SOMERVILLE, D.D.S., *Pres.*
Haileybury

WILLARD ARMSTRONG, D.D.S., *Sec.*
North Bay, Ontario

Montreal Fall Clinic

The 24th Annual Fall Clinic under the auspices of the Montreal Dental Club will be held at the Mount Royal Hotel, October 27-29, 1948. The preliminary program is as follows:—

Progressive Clinic on "Periodontia" consisting of three sessions divided into Scaling, Grinding, and Packing by D. P. Mowry, D.D.S., F.A.C.D., Dean of the Faculty of Dentistry, McGill University, assisted by Drs. W. F. Walford and P. J. Gitnick of the department of Periodontia, Faculty of Dentistry, McGill University.

Registered Clinics:—

"Amalgam": G. W. Johnston, D.D.S., Toronto.

"Hydrocolloid Techniques": J. B. Miller, New York.

"Acrylics in Crown and Bridge Work": W. C. Wohlforth, Commander (DC) USN.

"Mouth Reconstruction": W. C. Bushell, D.D.S., Montreal.

"Immediate Full Dentures": H. L. Esterberg, D.D.S., F.A.C.D., Boston.

"Silicate Restorations": G. W. Ferguson, Commander (DC) USN.

"Radiographic Examinations": J. C. Eselman, D.D.S., F.A.C.D., Pittsburgh.

"General Plan of Mouth Care": P. G. Anderson, D.D.S., Toronto.

Essayists:

Prof. E. G. D. Murray, McGill University, "Bacteriology and Immunology."

H. A. Hartman, D.D.S., Cleveland, "Clinical Photography."

C. F. Morgan, D.D.S., Washington, "Sulphonamides and Antibiotics."

Refresher Courses at Illinois

The University of Illinois College of Dentistry will offer seven refresher courses next fall starting September 7.

Courses will be offered in "Complete Dentures," "Partial Dentures," "Operative Dentistry," "Dentistry for Children," Oral Pathology, Diagnosis, and Surgery," "Root Canal Surgery and Periodontia," and "Crown and Bridge".

The courses will be offered in sequence, extending for a total of 12 weeks until November 26. Dentists may enrol in single courses, or may register for the complete program of 12 weeks.

Registration in each course will be limited to six students. Instruction in the courses will be given from 9 a.m. to 5 p.m., Monday through Friday. Registration may be made by writing to Dr. Isaac Schour, University of Illinois College of Dentistry, 808 S. Wood Street, Chicago 12, Ill.

Nothing is easier than fault-finding; no talent, no self-denial, no brains, no character are required to set up in the grumbling business.—Robert West.

The Forum

VINCENT'S INFECTION

by RAYMOND E. JOHNSON, D.D.S., F.A.C.D., Professor of Periodontia,
University of Minnesota, Minneapolis, Minn.

Condensed from Jour. of Ohio State D. Assoc.

Summing up the picture of an acute Vincent's Infection, we have: quick onset, inflammation, pain, pseudo membrane, glandular involvement, foul breath, salivation, malaise, bad taste and elevated temperature.

After the diagnosis is made, the patient should be advised as to the infectious nature of the disease, and instructed in the necessary precautions to prevent its spread. If necessary a cathartic should be prescribed to insure regular elimination. The following specific instructions are given to the patients which will emphasize the importance of their cooperation during the treatment.

1. As a Mouth Wash: Mix one-third Hydrogen Peroxide with two-thirds warm water. Use every two hours, swishing well between the teeth for three minutes.
2. Smoking is prohibited during treatment.
3. The excessive use of alcohol is contra-indicated.
4. Discard old toothbrushes.
5. Balanced diet with special emphasis on fruit juices.

The first thing of importance in the treatment of Vincent's Infection is to establish a high standard of mouth hygiene at the very first visit, thus reducing the number of organisms present as well as raising the resistance of the tissues. Entirely too much emphasis has been placed on the therapeutic value of some drug and too little on prophylactic treatment.

In the extremely acute case present-

ing ulcers in the floor of the mouth, cheek folds, or on the tongue, where the patient is very sick, suffering a great deal of pain and discomfort; one is limited in the amount of manipulation of the tissues until the very acute symptoms have subsided. In these cases carefully swab the infected areas with a mild, warm hydrogen peroxide solution, removing as much debris as possible from around the teeth so that the drug will reach all areas of infection. Next, with large cotton pellets wipe up all excess saliva, and swab all areas in the mouth with a solution of Neosarsphenamine (0.45 gm. tube dissolved in 10 cc. warm, distilled water). Have the patient hold this solution in the mouth for five minutes agitating well between the teeth. Also instruct the patient not to put anything in the mouth for at least one hour. This treatment is repeated daily in conjunction with the home use of hydrogen peroxide until the infection has become localized in the free gum margin. If this procedure is followed, very few treatments will be necessary before prophylactic treatments can be started.

In the subacute or chronic case the mouth should be thoroughly sprayed with a solution of fresh hydrogen peroxide and warm water at the first sitting. Next, carefully swab the infected areas with large cotton pellets, thus removing any necrotic tissue which presents a barrier to the action of antiseptics. Topical applications of a 5% chromic acid solution should be

used several times during each treatment to relieve pain and to assist in the removal of necrotic tissue. According to Dr. Merritt: "There is nothing better than a 5% solution of chromium trioxide (chromic acid) as an oxydizing drug to destroy the fusospirochetal organisms. Being a trioxide, it occupies a prominent place among oxygen-liberating preparations, a 5% solution yielding about 20% of available oxygen." Heavy deposits of tartar should now be carefully removed and the crown surfaces polished, removing food debris and accumulated filth.

In the more stubborn chronic cases in which there is a periodontoclasia with bone loss and deep pockets, isolate the teeth with cotton rolls or small gauze sponges. Have the saliva injector in place, cover the lip with a napkin, and dry off the saliva from the inter-proximal spaces and apply a saturated solution of trichloroacetic acid into the gingival crevice. A broken explorer makes a good instrument for carrying this solution to the tissues. The drop adhering to the instrument is sufficient. As soon as this application is finished, but before the cotton rolls or gauze sponges are removed, wash the teeth with a warm soda solution, a teaspoonful to a glass. Treat the whole mouth at a sitting, a quarter of the mouth at a time, being careful not to get any of the solution on the lip or tongue as it will burn. In preparing the trichloroacetic acid solution, add just enough distilled water to completely dissolve the crystals. In the most stubborn cases about three treatments three days apart are neces-

sary. Trichloroacetic acid cauterizes and so assists in shrinking the soft tissues to a normal pocket depth. The use of caustics such as trichloroacetic acid is considered by some dentists as irrational and nonsensical therapeutics yet, we have noticed no ill effects to the cementum when used as outlined. The slough which occurs does not leave any raw surface and healing occurs more rapidly than with any other medicament we have used in such cases.

In the acute cases only the superficial deposits of calculus have been removed to enable the mouth wash or drugs to better reach the infected areas, while in the chronic cases thorough scaling of all root surfaces is begun as soon as the tenderness of the tissues disappears. At this time ill-fitting crowns and partially impacted teeth should be eliminated. Over-hanging fillings should be replaced and decayed teeth restored. The number of treatments required and the frequency of the visits will depend entirely upon the severity of the case presented, and the cooperation of the patient.

Thorough scaling and the cleansing of the teeth is the most important step in the control of this disease, and unless thoroughly carried out reinfection will occur. Special emphasis should be placed on home care. Cooperation of the patient in thorough home care is absolutely necessary for permanency of results. Correct tooth brushing including massage of the gums, builds up the tissue resistance, eliminating the possibility of the development of periodontoclasia in the susceptible areas left by the loss of tissue.

HEALTH INSURANCE PLANNING

Editorial in Bul. of Midtown (N.Y.) Dental Society, March, 1948

The dental profession has been aware for some time of severe dislocations in our national economy. Dental practice in metropolitan New York has fallen off sharply, and has affected the older practitioners as well as the new graduates and veterans from

the service. There is considerable apprehension about the future, and, indeed, such concern is warranted by the objective conditions.

Although corporation and business profits began to make remarkable gains in 1941, it was not until the

latter part of 1942 that the dental profession could report appreciable gains in practice. The general increase in purchasing power and the appearance of "black-market" money among the middle class made possible the correction of long neglected dental defects. The shortage of dental personnel created by the war only intensified the situation.

During the years 1942 to 1946 the dental profession experienced an unusual demand for their services. Appointments three to four weeks apart were not uncommon, and many patients complained about the difficulty in seeing the dentist of their choice. The comet-like rise in popularity of complete mouth rehabilitation was an accurate measure of the dental purchasing power.

However, since the beginning of 1948, the profession as a whole has had serious misgivings about the future, and wherever men get together everyone asks "What's happened to practice?"

The answer to this question can be found in the rapidly dwindling purchasing power of the people. Dental treatment is needed as much now as it was a few years ago. The return of a large number of men from the armed forces has been a significant factor, but if the demand for dental care had remained constant this increase in personnel would have gone

almost unnoticed Today, however, we have inflation. The real value of money has decreased markedly, and the "luxury" of dental care has given way before the fantastic cost of necessities. . . . Our prominent economists do not talk about the possibility of a depression, they vie with each other in speculating about when it will take place. The dental profession cannot realistically expect conditions to improve as long as Congress and the Administration maintain their present course.

The dental profession can make a constructive effort toward achieving some economic security. Dental care prepayment programs, especially for children, have long been recognized as a logical step toward the solution of the dental care problem throughout the country. The American Dental Association and its component Societies should initiate conferences of civic, farm, labour and professional groups working toward the formation of dental care programs on a civic, state and federal level. Also, the profession must actively urge the expansion of existing public health facilities with adequate compensation to participating dentists. These and many other steps could be taken once the profession is fully cognizant of the fact that the solution of its economic problems can only be achieved in cooperation with the people it aims to serve.

THE IMPORTANCE OF SURGICAL PRINCIPLES

by WARREN R. SCHRAM, D.D.S., M.S.D.

Associate Professor of Oral Surgery, Northwestern University Dental School
Condensed from *The F. Review of the Chi. D. Society.*, May 1, 1948

When multi-rooted teeth are fractured at the gum line, in many instances simple separation of the roots and the removal of them separately is the method of choice. The bi-bevel surgical drill is preferred for this purpose since it does not roll up blood and bone dust, and thereby act as a burnisher of bone. It cuts tooth and bone rapidly, and by the sense of touch the operator is always aware of the structure which the drill is

cutting.

It is never good policy to tear the soft tissue of the mouth. When this might occur, it is far better to make a sharp incision about half an inch long parallel to the roots of the teeth and far enough anterior to the operative field so that when the soft tissue is replaced the suture line will lie over undisturbed bone. It is not advisable in most cases, even though it may be possible, to force widely bi-furcated

or bulbous roots from the tooth socket. This will result in the burnishing of bone and lessen the likelihood of a firm blood clot. When a flap of soft tissue is raised the operator, under direct light and vision, may do the necessary surgery with precision. This may require the sectioning of teeth or roots or the removal of bone to secure space for the seating of forceps or elevators. It may also be required that space be obtained in which to move the tooth or root in such a direction as to insure delivery. As a general criticism; when forceps or elevators, particularly elevators, are applied they are seated in too careless a manner and then too much force is used. These instruments, always well guarded, should be seated with considerable force and precision, and then in a careful manner pressure should be applied.

The removal of bone in the upper jaw can be accomplished very satisfactorily by the use of the automatic chisel or the hand chisel. It is important that the blow of any chisel be so directed that it will engage the bone, remove a portion, and emerge. Any of

you who have had the experience of having a chisel used in your own mouth, in such a way that it does not emerge but that the maxillary bone receives the full shock of the blow, will immediately recognize the importance of this statement. By careful application of the chisel, bone may be bevelled in such a way as to make the further treatment of this structure unnecessary. In removing bone from the lower jaw the bi-bevel drill is usually preferred, although it may be so supplemented by the chisel.

I should like to repeat that careful operating dictates that every effort be made to protect the blood clot and to maintain the vitality of the underlying bone. It is believed that a sound blood clot is the most satisfactory dressing for an extracted tooth socket. Well placed sutures will often make the retention of the blood clot more certain. Number 40 black silk or cotton thread is satisfactory for such sutures. They should not be under tension except when they are used to control post-operative haemorrhage.

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"I must be getting old—my wife has stopped hiring and firing my receptionists."

GLUECK

PROPHYLAXIS, TOOTHBRUSHING, AND HOME CARE OF THE MOUTH AS CARIES CONTROL MEASURES

by MAYNARD K. HINE, D.D.S., M.S., School of Dentistry,
University of Indiana, Indianapolis, Ind.

Summary of paper in Jour. of D. Research, April, 1948

There is considerable evidence in the literature that mechanical cleansing of teeth will reduce the numbers of bacteria in the mouth and on the teeth. Certainly frequent mechanical cleansing will also reduce the volume of media for microorganisms to utilize. It is probable, therefore, that the cleaner the teeth the less likely they are to decay.

However, it is apparent that the numbers of oral bacteria quickly return to a high level soon after mechanical cleansing, and that it is not possible to remove all oral bacteria by mechanical procedures alone. This coupled with the fact that the cleansing must be done thoroughly and immediately after eating if it is to be effective, makes mechanical cleansing

of teeth of limited value in dental caries control. More carefully controlled clinical research must be done to determine the effectiveness of mechanical cleansing.

Widespread mechanical cleansing of the teeth with detergent foods, a toothbrush, a nonmedicated mouth rinse, can be recommended because of its aesthetic value, beneficial effects on gingival tissues, and possible interference with dental caries. Routine mechanical cleansing of teeth is apparently not harmful.

Because there is no known way of removing mechanically all bacteria and food debris from the teeth for any length of time, mechanical cleansing of the teeth alone cannot be expected to prevent caries.

STUDIES IN THE DIETARIES OF CONTEMPORARY PRIMITIVE PEOPLES

by MEYER KLATSKY, D.D.S., New York
Summary of Paper in J.A.D.A., April-May 1948

Studies show that, from a purely nutritional viewpoint, the dietaries of most primitive people are poor, monotonous and inadequate. It is erroneous to ascribe the well developed jaw bones and muscles and the healthy teeth of the primitives to good nutrition. They enjoy these benefits in spite of inadequate nutrition. The texture of food consumed by primitives is rough, bulky and resistant—qualities which tend to stimulate the masticatory apparatus to great activity and proper function. Good function contributes to

good growth and healthy development of these organs.

The underdeveloped jaws and the poorly aligned and carious teeth of modern people are products of civilization. These conditions are not caused by faulty nutrition, as civilized people are better nourished than most of the primitives. The refined texture of the food we eat and the sophisticated methods of its preparation and consumption are the most important contributing factors in dental degeneration.

Happiness in this world, when it comes, comes incidentally. Make it the object of pursuit, and it leads us a wild-goose chase, and is never attained. Follow some other object, and very possibly we may find that we have caught happiness without dreaming of it; but likely enough it is gone the moment we say to ourselves, "Here it is!" like the chest of gold that treasure-seekers find.—Nathaniel Hawthorne.

He is not only idle who does nothing, but he is idle who might be better employed.—Socrates.

THE ABRASIVENESS OF DENTIFRICES AS MEASURED ON THE CERVICAL AREAS OF EXTRACTED TEETH

by PAUL C. KITCHIN and HAMILTON B. G. ROBINSON
Dental College, Ohio State University, Columbus, Ohio

Summary of paper in Jour. of D. Research, April, 1948

A series of nine widely used commercial dentifrices, pastes and powders, ten experimental pastes, salt and soda, and water have been tested for abrasive action on the cervical area of extracted teeth. The depth of the abrasive cut per 100,000 cross strokes ranged from almost zero (0.006 mm.) for water through 4.48 mm. for the most abrasive dentifrice tested.

Equal parts of salt and baking soda resulted in an abrasive effect about equal to the least abrasive commercial

dental paste tested.

With one exception, the commercial tooth powders tested were markedly more abrasive than were the commercial tooth pastes.

The number of years which would be required for various dentifrices to cut half through a maxillary canine 7 mm. thick has been computed. The values range from infinity for water to approximately 7.6 years for the most abrasive dentifrice tested.

MEDICAL SCIENCE AND THE LONGER LIFE

by ESMOND R. LONG, Henry Phipps Institute, University of Pennsylvania

Condensed from Science

Among the most pressing issues of the time are social security and proper provision for old age. The average length of life is greater than in all past generations, and every opportunity exists to make it much richer. The physician has been as fortunate as anyone. His expectation of further life at the age of graduation, if we accept 25 as that age, has increased in the last 40 years from 38 to 44 years. Professional men and all others have gained, moreover, not only in longer life but in freedom from crippling disability.

Within the last 40 years the proportion of people over 60 years of age in the population has doubled. It is now more than 10%, and it is expected to double again in the next generation. The increase in average life span, however, has not been accompanied as yet by a significant increase in the maximum life span. Although the proportion of persons over 60 years of age is rapidly increasing, the average man at 60 has approximately the same life expectancy (about 14 years for white males) as he would have had in 1900. The lives saved from extinction by the infectious diseases in the early and middle years are still lost at an age

not far from the traditional one of the past from the vascular degenerations and cellular aberrations of old age. With further reduction in preventable disease in the older age groups, the average life may extend to 75 years. Optimists believe that it should reach 100. Whether it will or will not remains to be seen, but it is unlikely that it will ever pass that figure, for all past experience indicates that 100 is the approximate maximum age that man can ever attain.

The saving of life in the middle years is no great gain, however, if life is to be burdened with discomfort and made unproductive by disability in the late years. Fortunately, the medical sciences are making continuous strides in the mitigation, if not the elimination, of the ailments of advancing age. No longer should people be toothless, half blind, and stone deaf. Early and expert care, modern root therapy, and the elimination of oral sepsis have saved countless teeth, and ingenuity in the manufacture of dentures has gone a long way in the functional replacement of teeth that could not be saved. At the same time the removal of foci of chronic infection through proper treat-

ment or extraction of infected teeth has reduced the incidence of those systemic infections believed due to mouth sepsis. The most disabling of chronic illnesses, crippling arthritis, may yet yield to advance in this field.

The now popular questionnaire type of research has demonstrated conclusively that a steadily growing percentage of the average physician's time is devoted to practice on persons in the late years of life.

Today's increasing interest in the

diseases of later years, as reflected in the allocation of life insurance funds for the study of heart and vascular diseases and the appropriation by Congress of funds for the investigation of cancer, forecasts the emphasis in future medical research as well as practice.

There is every reason to believe that the next 50 years will be at least as fruitful in the medical sciences as the last 50. Probably they will be much more so.

IN VITRO STUDIES OF SODIUM BICARBONATE IN RELATION TO CERTAIN FACTORS CONCERNED WITH DENTAL CARIES

by ROBERT J. BRUCKNER, D.D.S.

School of Dentistry, Western Reserve University, Cleveland, Ohio

Summary of paper in Jour. of D. Research, April, 1948

Adherent, cloudy films of plaque-like nature have been deposited on sheets of cellophane and their effects on the rate of dialysis of sodium bicarbonate through the cellophane have been studied. The plaques slightly inhibit but do not prevent the passage of the bicarbonate through the membrane.

The effect of sodium bicarbonate on acid production and growth of *L. acidophilus* has been studied in vitro.

Inhibition of growth occurs which, it is believed, can be attributed in great measure to pH changes that occur in the media. However, reference is made to a limited number of individuals whose *L. acidophilus* count was reduced or maintained negative during two- and six-month periods in which sodium bicarbonate was employed as a dentifrice.

SODIUM FLUORIDE REAGENT CONCENTRATION AND POWDERED ENAMEL SOLUBILITY

by JOSEPH C. MUHLER, B.S., and GRANT VAN HUYSEN, D.D.S.

Indiana University School of Dentistry, Indianapolis, Ind.

Summary of paper in Jour. of D. Research, April, 1948

1. In this experiment a 2 percent solution of sodium fluoride is found to be the best concentration to use for reducing the solubility of powdered enamel.

2. Buffered solutions of sodium fluoride are much more effective than unbuffered solutions.

3. The most effective pH for a 2 percent reagent solution is 4.5.

4. It is suggested that at a concentration of 2 and 3.5 percent, respectively, the solution is more highly dissociated than at any other concentration used, thus making it more effective in its ability to reduce "enamel solubility."

The chairman of the Department of Soils at the University of Missouri, has reached the conclusion, as a result of innumerable studies of farmlands in the Midwest, that soil fertility on an individual farm can be depleted enough, through failure to return manure, crop residues, and other enriching elements, to shift that farm within a single human generation from a place of good health to one of deficiency diseases for the farm animals and for the families that live upon it.—Fairfield Osborn.

All truth is safe and nothing else is safe; and he who keeps back the truth, or withholds it from men, from motives of expediency, is either a coward or a criminal, or both.—Max Muller.



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Editorials

NATIONAL HEALTH INSURANCE

In this issue of the Journal appears a thought provoking paper by Doctor R. A. Rooney of Edmonton entitled "Dental Treatment plan for Pensioners". In this splendid article the author points out, and rightly so, the great advantage to all concerned of having the control of all administration and treatment in the hands of the Dental Board, and how satisfactory this plan has proven in Alberta. However this writer must take exception to the statement that the fee schedule approved by the federal government for the treatment of discharged service personnel following the last war proved satisfactory across the country, and that this Alberta plan might well set the pattern for any future health security plan involving the whole population.

Where this service involves only the pensioners and their dependents the fee problem does not assume large proportions but when the whole population is included this is a different matter. If all dentists were equal in ability one could not criticize this plan, but such is far from being the case. One dentist on account of natural ability, hard work and great vision naturally finds himself in a position where his service is recognized as being superior to that of his neighbour and yet under this plan all receive the same fee which in the long run places a premium on inefficiency in any federal scheme involving the whole population.

This is one of the chief difficulties in the path of agreement between the British government and the dental profession at the present time as outlined in the fine paper by a British Correspondent published in our March Journal. This particular difficulty could so easily be settled by hav-

ing the government accept the principle of "Grant-in-Aid" so that those patients who wish to go to a dentist with recognized superior ability may be able to do so by simply paying the difference between this dentist's regular fee and the government fee. In this way differences in overhead expense could be met. The dentist who is experienced, who is painstaking, who has great ideals in his practice would still be able to retain those ideals and carry on under government regulations.

Furthermore if the Federal Government enters upon a plan of Compulsory Health Insurance the object will be, from a dental standpoint, not only to make it possible for every individual to obtain dental treatment but to encourage every individual to obtain this service thus making for a healthier race. If there is to be any hope of achieving this goal the government will have to make a grant of much more than twenty-five cents a month per capita, which is the amount donated by the Alberta Government for the treatment of pensioners and some methods would have to be evolved to encourage more than 1,600 out of 20,000 to apply for treatment during an eight month period.

With regard to pensioners the Alberta arrangements do offer a plan of relief for those who urgently need such service or who think they do, but the plan should be scrutinized most carefully before deciding to suggest it as a suitable pattern for any future security plan involving the whole population.

However, in spite of the above objections the Dental Board of Alberta is to be congratulated upon being able to retain control of the administration of the government fund as well as the plans for treatment.

M. H. G.

C.D.A. DUES

In the May 31 issue of *Life* magazine appears a most comprehensive statement of the financial status of United States Labour Unions. It was pointed out that 32 unions had an average of \$7,000,000 in their treasuries available for any emergency. The average minimum yearly dues in these 32 unions is nearly \$20.00. Twenty-two of these unions have maximum annual dues averaging about \$38.00. In other words they are vigorous and rich and powerful.

How different is the position of the Canadian Dental Association! Considering our facilities we may be vigorous but we are neither rich nor powerful and it is this writer's considerate opinion that we should be both.

It is not necessary to enumerate, as has been done so often, the many problems facing the dentists of Canada today, also the many problems which may confront us in the future with great suddenness and with great cause for concern. Let us think on these things while there is yet time.

M.H.G.

ROYAL CANADIAN DENTAL CORPS NEWS

Major B. P. Kearney, MBE, of the DGDS Staff, was present at the recent post-graduate course in periodontia, given by the Faculty of Dentistry, University of Toronto.

Applications are invited for a limited number of vacancies as Dental Officers in the RCDC (AF). For information regarding

terms of service, applicants should apply to: Director General Dental Services, Department of National Defence, Ottawa.

21 COTC Cadets from the Dental Faculties of the Universities of Alberta, Dalhousie, Montreal and Toronto, are attending a 4-weeks course at The RCDC School in Ottawa.

CANADIAN DENTAL ASSOCIATION NEWS

New C.D.A. Officers

At the Annual Meeting of the Canadian Dental Association held at The Manoir Riche-lieu, Murray Bay, in June the following officers were elected:—

President: Dr. H. J. Merkeley, Winnipeg, Man.

Vice-President: Dr. G. Vernon Fisk, Toronto, Ont.

Sec.-Treas.: Dr. Don W. Gullett, Toronto, Ont.

The following committee chairmen were also elected:—

Executive: Dr. H. J. Merkeley, Winnipeg, Man.

Legislation: Dr. C. W. Sheridan, Ottawa, Ont.

Finance: Dr. J. K. Carver, Montreal, Que.

Publications: Dr. R. P. Lowery, Toronto, Ont.

Dental Education: Dr. W. Scott Hamilton, Edmonton, Alta.

Dental Public Health: Dr. R. R. McIntyre, Calgary, Alta.

Public Relations: Dr. Harry S. Thomson, Toronto, Ont.

Ethics: Dr. K. M. Johnson, Winnipeg, Man.

Research: Dr. W. G. McIntosh, Toronto, Ont.

By-Laws: Dr. J. S. Bagnall, Halifax, N.S.

Necrology: Dr. George Cameron, Ottawa, Ont.

Nomenclature: Dr. J. N. Johnson, Toronto, Ont.

International Relations: Dr. E. Charron, Montreal, Que.

Dental Services: Dr. D. S. Coons, Hamilton, Ont.

Advisory: Dr. J. A. Bothwell, Toronto, Ont.

Health Insurance: Dr. W. Harvey Reid, Toronto, Ont.

Auxiliary Services: Dr. R. A. Rooney, Edmonton, Alta.

Industrial Dentistry: Dr. C. A. E. McCabe, Valleyfield, Que.

Specialists and Specialization: Dr. Arnold Mitchell, Montreal, Quebec.

War Memorial Scholarship: Dr. Gerald Franklin, Montreal, Que.

Hospital Dental Services: Dr. D. M. Tanner, Toronto, Ont.

Group Insurance: Dr. P. G. Anderson, Toronto, Ont.

Honorary Membership in The C.D.A.

At the Annual Meeting of the Canadian Dental Association held in June the following were given honorary membership in the Association:—

Dr. Harold Hillenbrand, Chicago, Ill.,

U.S.A. Secretary of the American Dental Association.

Dr. Joseph Nolin, (posthumously) late of Montreal, Que.

NEWS FROM THE PROVINCES

SASKATCHEWAN

Saskatoon Dental Society

"Recent Atomic Developments in Canada" was the subject of an address given before this society by Dr. Spinks, the head of the Department of Chemistry, University of Saskatchewan. He discussed the subject under the following headings:—

- Sources of Uranium and radioactive materials and their purification.
- Peculiar characteristics of radioactive phosphorous in plants, animals, etc.
- The general formation of our atomic bomb.

The lecture was a most interesting one and numerous questions were asked. The Society was very grateful to Dr. Spinks for his most educational lecture and informal discussion.

Regina Dental Society

Officers for 1948-49.

President: Dr. Campbell Dixon.

Vice-President: Dr. Oliver Brett.

Sec.-Treas: Dr. H. R. Kerr.

At the last meeting Dr. J. N. Riffel presented an interesting clinic on "Impression Taking—The Forney-Tunney Method," which was greatly appreciated by all members of the Society.

Members of the Regina Society attending the meeting of the C.D.A. at Murray Bay are Dr. Brett, Dr. Blair, and Dr. Fasken.

L. D. H.

MANITOBA

Winnipeg Dental Nurses and Assistants Donate \$500

"Do something for the Children's Hospital" were words so often spoken by Miss Ethel Brown, retiring president of the Winnipeg Dental Nurses' and Assistants' Association. A check for \$500.00 has been presented to the Building Fund of the Winnipeg Children's Hospital, proceeds of the Leap Year dance held April 9 at the Royal Alexandra Hotel, under Miss Brown's supervision.

FLORENCE JEFFREY

ONTARIO

Radiodontic Presentation

A splendid paper on "Dental X-Ray Inter-

pretation" was presented by Prof. H. M. Worth at the annual meeting of the Ontario Dental Association in May. Dr. Worth, formerly at Guy's Hospital in England, is at present Chief Radiologist at the Toronto General Hospital, Wellesley Division, and lecturer in Radiodontic Interpretation, Faculty of Dentistry, University of Toronto.

Prof. Worth's address was accompanied by some fifty well chosen slides which represent a portion of his very fine personal collection. Pathologic bone abnormalities characterized by varying radiolucent areas were discussed and classified as dental granulomata, dental cysts, benign tumours, carcinomata and osteosarcomata. Speaking quietly with a soft English accent, Dr. Worth gained many friends and followers and indeed added to the reputation which preceded him. It was a cultured and scholarly presentation, enjoyed and appreciated by all who attended.

R. W. M.



Photograph of those attending the Post Graduate Course in Periodontology in the Faculty of Dentistry, University of Toronto. The above group includes the following: Armstrong, T. E., Windsor, Ontario; Diel, David, Cleveland, Ohio; Collins, D. Gale, Odessa, Texas; Honey, E. M., Toronto, Ontario; Johnston, B. M., Barrie, Ontario; Kanter, Saul, Cleveland, Ohio; Kearney, B. K., Ottawa, Ontario; Kruska, H. J., Bristol, Indiana; Mullins, T. P., Chadron, Nebraska; Summerfeldt, C., Toronto, Ontario; Wills, J. N., Prescott, Ontario and Wohleld, S. H., Buffalo, New York.



LENA A. BURGER



BEVER. V. J. CARL



RUTH A. CASE



BARBARA A. COUTTS



MARGARET G. DAVIDSON



SHIRLEY E. DICKS



HELEN R. DUKE



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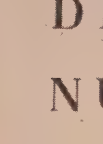
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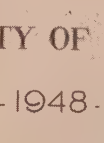
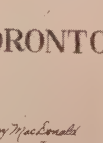
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SUPERVISOR

MARY M. GRAHAM



JEAN G. WIDDICOMBE



BARBARA H. WILLIAMS

GRADUATING CLASS

DENTAL
NURSING

UNIVERSITY OF TORONTO

-1948-

Anthony MacLennan

DENTAL NURSES GRADUATE

The members of the 1948 Class in Dental Nursing of the Faculty of Dentistry, University of Toronto are as follows: Misses R. A. G. Case, Owen Sound; B. A. Coutts, St. Catharines, Ontario; M. G. Davidson, Regina, Saskatchewan; H. R. Duke, Delhi, Ontario; C. J. Giddy, Port Hope, Ontario; M. M. Graham, Barrie, Ontario; N. J. Hinton, Barrie, Ontario; G. C. Hurton, Glenboro, Manitoba; E. D. Milne, Regina, Saskatchewan; L. J. Pearson, Midland, Ontario; M. C. Spicer, Kentville, N. S.; P. E. Trenwith, Clarkson, Ontario; J. L. Tripp, Oxbow, Saskatchewan; H. G. Vigrass, Swastika, Ontario; J. G. Widdicombe, St. Catharines, Ontario; and from Toronto: Misses L. C. Burger, B. J. Carl, S. E. Dicks, K. E. Ferrier, C. J. Lukes, M. L. Mercer, M. A. Paul, M. E. White, and B. H. Williams.

The Commencement Exercises of the Class of 1948 in Dental Nursing were held on June 2, in Convocation Hall, University of Toronto, and diplomas were awarded by President Sidney Smith to the successful candidates.

Throughout the past academic year twenty-four students have been attending the course in Dental Nursing at the Faculty of Dentistry. Lectures and class laboratory instruction have been provided, with considerable time devoted to gaining practical experience in departments throughout the Dental Building.

The course in Dental Nursing includes the

following subjects: Accounting Principles, Correspondence and Business Practice, Ceramics, Dental Anatomy, Dental Bibliography, Ethics and Jurisprudence, Hygiene, Oral Hygiene and Preventive Dentistry, Elementary Bacteriology, Radiography, Dental Surgery Assistance, Operative Dentistry Assistance, Orthodontic Assistance, Periodontia Assistance, Prosthodontia Assistance, Pedodontia Assistance, and Typewriting.

This past year the student dental nurses spent two weeks in various offices of Toronto dentists gaining experience in private office

routine as well as attending dental clinics in the Toronto General Hospital, and City Public Schools.

Further information may be obtained by writing to Dean R. G. Ellis, Faculty of Dentistry, University of Toronto.

Faculty of Dentistry, Toronto Given Grant by Kellogg Foundation

President Sidney Smith, University of Toronto announced on June 25 that a grant of \$22,975.00 by the Kellogg Foundation has been made to the Faculty of Dentistry. The grant covers a three year period and a cheque for \$6,570.00 has already been received.

The purpose of this fine gift is to assist in extending and strengthening the Faculty's program of graduate and post graduate education. In this connection three projects are immediately being planned:—

1. Short continuation courses, a program of which will soon be announced and mailed to every dentist.
2. Assistance to be given in the diploma courses such as D.D.P.H. and the other specialty courses.
3. A series of lectures on Oral Diagnosis and Cancer Control are being arranged and presentation is planned in January.

Dean Ellis is very pleased with this splendid gift which will materially benefit the graduate department of the Faculty.

DEAN ROY G. ELLIS Faculty of Dentistry, Toronto To Be Honoured in England

On July 25, Dean Ellis leaves by plane for England to receive on July 28 the degree "Fellowship in Dental Surgery" from the Royal College of Surgeons of England. The degree is designated F.D.S., R.C.S. (Eng.). This is the highest diploma in dental surgery that the college awards and is a newly created degree. Nearly all the fellows who have been elected without examination are English dentists and Dean Ellis is the only dentist from Canada.

With characteristic modesty Dean Ellis insists the award is not a personal honour but is a recognition of dentistry and dental education as represented by the Faculty of Dentistry, University of Toronto. However an English colleague writes, "This is a fitting recognition

of your distinguished services to dental surgery and through you of dental education in Canada."

Three American dentists will be similarly honoured at the same time as Dean Ellis. They are Dr. David Lynch, Washington, member of the Board of Governors A.D.A., Dr. A. F. Jackson, Orthodontist, Philadelphia and Dr. Malcolm Carr, Dental Surgeon, Washington.

Fluoride Treatment of Grade 2 Classes

Dr. Ralph Connor, dental officer of health, announced on June 4 that within ten days two classes in Guelph elementary schools would receive topical applications of sodium fluoride.

Sanctioned by the local Board of Health and approved by the school management committee of the Guelph Board of Education it is proposed to make a start on a dental preventive program with children around the age of seven years who are in Grade 2 classes.

BRITISH COLUMBIA

Disastrous Floods

When widespread disaster occurs, all professions and business must suffer to a greater or lesser degree, depending upon proximity to the location affected. With flood waters roaring down the main rivers of this Province, many areas of richly productive land have been covered with up to thirty feet of water, ruining homes and buildings of all descriptions; causing loss of valuable farm stock; destroying crops and rendering land useless for many months to come. When the waters recede, the work of re-habilitation will start. Until then, we can have little conception of the degree of waste. The effect upon business in general in the stricken areas will be profound; the effect upon the practices of our fellow dentists in those districts will be equally great.

Here in the Fraser Valley, extending from the Coast to about seventy miles inland, the flood has brought tragedy to many thousands of people. This richly productive farm, orchard and dairy land has been dyked for many years against the flood waters of the spring from the Fraser River, and the dykes have proved effective for more than fifty years. This year, with floods general throughout the western part of the continent, the dykes proved inadequate, and the frantic efforts of thousands of residents, bolstered by volunteer efforts of many more thousands from surrounding areas,

proved effective in only a few districts of the Valley. There are many flourishing towns in the Valley, and the dentists in these towns have willingly closed their offices and joined in the fight. We quote sections of a letter from a Chilliwack dentist—"For the last ten days, everyone has been out doing a share of the work—filling sand bags and carrying them to areas where there was a great deal of erosion. Dental nurses have been working in twelve to eighteen hour shifts on the mobile diet kitchen, serving sandwiches and coffee. After being out all night on patrol, filling sand bags, or on some other vital job, you are bent over double, and sore and aching to such an extent that you cannot sleep, so you start again, determined to win the battle against the water. Well, fellows, if the dykes break there will be no dentistry for the fellows in the downstairs offices, and not much more for the ones upstairs, so we just joined the h-men of the farms, and did our little part."

Here in New Westminster and Vancouver, on the banks of the lower Fraser, we can understand what he means. Thousands of volunteer workers from Vancouver and other nearby districts that were not threatened by the waters have joined in the battle. We have met professors from the University of British Columbia; prominent lawyers; business executives, together with labourers, Hindus, and all sorts and conditions of men, and women, on the sand bag line, working throughout the nights and days. We know from experience of coarse sand working down between clothing and sweating bodies, of filling and lugging sand bags over slippery muddy planks, of aching legs and sore backs in the early hours of the morning, and we confess to a sight not at all common to us—the sunrise over the mountains about five o'clock in the morning.

Although no dentist in the Valley has had the flood waters actually enter his office, as far as we know, all of them will suffer to a very considerable degree during the period of recovery which may last for many months, if not years.

The British Columbia Dental Association, acting with members of the executive committees of the College of Dental Surgeons, and the Vancouver and District Dental Society, took prompt action in urging donations from members to the Emergency Flood Relief Fund. At a combined meeting in Vancouver on June 3 a committee was appointed to act. A letter

was sent to all members of the Association in the Province, and arrangements were made to follow up the letter with a personal canvass in cities and towns where more than two or three dentists practice.

L.G.R.

Pacific Coast Dental Conference

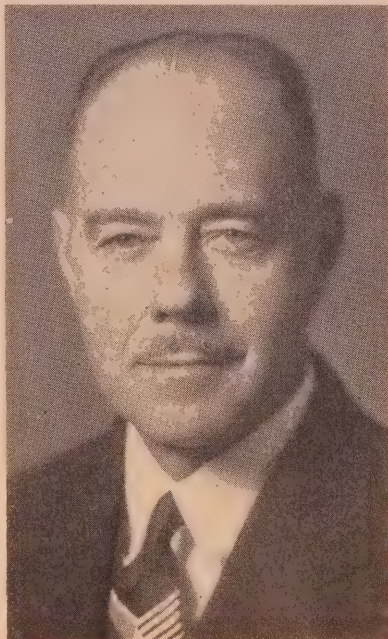
Considerable interest is being taken in the Pacific Coast Dental Conference, to be held in Salt Lake City next month, and we learn that registration from this Province is encouragingly large, even at this early date.

QUEBEC

New Dean at McGill

Daniel Prescott Mowry, D.D.S., F.A.C.D., of Montreal, Professor of Operative Dentistry at McGill University has been appointed Dean of the Faculty of Dentistry of that institution, succeeding Dr. Arthur L. Walsh who has been dean since 1927.

A prominent figure in dental education in Canada as well as in dental research and in the practice of periodontia, Dr. Mowry is also active in the fields of literature and the arts.



DR. T. P. MOWRY

He is an active member and a past president of the St. James Literary Society before which he has read many papers. He is a student of philosophy and anthropology and an early interest in flying led to a pilot's licence and the presidency of the Montreal Aeroplane Club.

Twice president of the College of Dental Surgeons of the Province of Quebec, former president of the Montreal Dental Club, Dr. Mowry also spent one term on the Montreal City Council. At present in addition to being a Fellow of the American College of Dentists and a member of the American Academy of Periodontology he is on the Montreal City Board of Health and on the Board of Governors of the Sir George Williams College.

He is also the Canadian Dental Association representative on the proposed Rheumatic and Arthritic Association; Vice-President of the Dental Hygiene League of Quebec; Member of the Visiting Staff of the Royal Victoria Hospital; consultant in Periodontia at St. Mary's Hospital and Professor of Periodontia, McGill University.

Dr. Mowry has presented papers before the College of Dental Surgeons of the Province of Quebec; Canadian Dental Hygiene Council; Canadian Dental Association; Toronto Academy of Dentistry; Dental Society of Vermont; Second District Dental Society of New York City; Adirondack Dental Society; International Dental Federation, Paris; American Dental Association and all local dental societies.

ALBERTA

Study Club for Children's Dentistry

A year ago, in Edmonton, a "Study Club for Children's Dentistry" was founded under the direction of Dr. S. A. MacGregor of Toronto. At present the club consists of nine members who meet once a month for study. The chairman is Dr. William Orobko and the secretary is Dr. R. H. Blaquiére.

The club has been instrumental in getting an excuse slip for school children accepted by the School Board.

The following is a list of the subjects to be studied commencing this fall:

BASIC SCIENCES: Genetics, Heredity, Embryology, Environment, Tooth Eruption, Caries, Diet, Habits, Psychology, Pediatrics, Dermatology, Growth and Development.

PRACTICAL: Examination, Radiology and Bone Picture, Periodontia, Hygiene, Anaesthesia, Cavity Preparation, Bases, Fillings, Pul-

potomies, Fixed Retainers, Removable Retainers, Tooth Movement, Enzyme Inhibitors, Diet, Roll of the Assistant, Tripe, Accidents to Teeth, Handling of Children, Oral Lesions.

This club has in mind the improving of knowledge in this field, a keener interest in anything pertaining to children's dental health and later the offering of speakers to Home and School Associations.

First Annual Convention of Edmonton Dental Nurses' and Assistants' Association

About 60 dental assistants from Edmonton and Lacombe, Red Deer and Wetaskiwin, registered at the Macdonald Hotel May 27 for the First Annual Convention of this Association.

Dr. Scott Hamilton, Dean of Dentistry, gave the opening address. He congratulated the girls on the success of their organization. He spoke on the qualifications of a dental nurse. Some consideration, he said, will be given to the possibility of establishing a course for dental hygienists in Canada. This, it is hoped, would lead to work in Public Health by dental education.

Dr. H. L. McLean spoke on x-ray work, discussing the various types of x-ray and the dental assistant's part in taking x-rays, developing them and mounting them. Dr. McLean suggested that study clubs for both doctors and assistants be formed.

Dr. P. J. Kendal brought greetings from the Edmonton Dental Association and gave the assurance of the Association's support. Dr. Kendal spoke on the "Dental Assistants' Role in Oral Surgery."

At noon the dental assistants were guests of the B.C. Dental supply Company and Denco Co. Door prizes were donated by the Ash Temple Company and these were given at the luncheon. Miss Bernice MacBeth was guest soloist.

Dr. R. A. McEwen gave a clinic on the "Insertion of an Amalgam Restoration", Miss V. Smith assisting him. Dr. McEwen showed films on immediate dentures and on the North country. The latter, he had taken while practising in the army and as a civilian in Yellowknife and other parts of the N.W. Territories.

Miss Martha MacAndrew, President, was chairman during the day. Assisting her were the members of the Executive and Vera Whituik, Margaret Hamm and Dean Rogers.

DOREEN ADAMS. *Sec.*

EMPIRE NEWS

GREAT BRITAIN

The Spens Report

*Condensed from Editorial in Br. D. Jour.,
May 21, 1948*

The outstanding feature of the Report of the Spens Committee is the tables showing the pre-war incomes of dentists classified in age groups. These tables show that for the years under review—1936, 1937, 1938—of the dentists aged 35-54 practising in large towns 69.7 per cent had incomes of less than £1,000 per annum and—even more striking—that the incomes of 19.8 per cent of dentists in that age-group were actually less than £400 per annum. At the other end of the scale the figures show that only some 25 per cent of the profession had incomes in excess of £1,100 per annum and only in something like 5 per cent of cases did the income exceed £2,000 per annum. Summing up these figures the Report says,—

"The above figures show that very few dentists make large incomes; that most dentists are making net incomes of less than enough to meet minimum middle-class expenditure, and that a quarter of the profession of necessity live below this standard."

Noting that the dental schools are at present full, the Report adds the warning that:—

"Unless the dental profession is made more attractive, there can be no guarantee that when the present abnormal situation has passed, the dental schools will remain full or that the hope of the Interdepartmental Committee on Dentistry that there will be a substantial increase in the student entry into those schools will be realized."

Broadly the recommendations of the Report, expressed throughout in terms of the 1939 value of money, are that the incomes of dentists earning less than £800 per annum should be increased by £400 and that incomes of over £800 should be raised by one-third of the amount by which the 1938 income fell short of £2,000. For example, an income of £1,000 ought in the Committee's view have been £1,333 and one of £1,500-£1,666.

They have also made some valuable suggestions, as to how the incomes of general dental practitioners could be augmented. Possibly the most important of these is the recommendation that dental specialists who have had training comparable to that of medical specialists and have obtained comparable

higher qualifications ought to be remunerated within the same range as medical specialists.

The Plebiscite Result

In the plebiscite of February there was a 9 to 1 majority in an 84 per cent poll against the Act. In this plebiscite approximately 2 out of every 3 doctors in a 77 per cent poll disapprove of the Act, notwithstanding the concessions Mr. Bevan has made. The figures show that some of those who disapprove of the Act are nevertheless prepared to enter the Service on July 5.

In the last plebiscite 17,000 general practitioners were not prepared to enter the National Health Service. Those who still hold to this opinion now number 9,588. This figure falls far short of the 13,000 considered to be necessary in order to justify collective opposition to the Act, and the B.M.A. Council would therefore not appear to have a mandate to recommend such a course to the Representative Body. 7,000 general practitioners have changed their minds as a result of the concessions made by Mr. Bevan—and over 2,000 have not troubled to vote. It is possible that on further reflection more general practitioners will consider that while they have not gained all the points they sought the promised Amending Act and other concessions made by Mr. Bevan will provide them with an opportunity to practise their profession as independent men and women.—*Br. M. Jour.*

The Health Service Act

Unlike the British Medical Association, the British Dental Association held no plebiscite to discover how much support it could expect from its members for its policy of resisting the Health Service Act, and proposed regulations. In February however, meetings were held by branches and groups up and down the country, and the degree of unanimity of views dissenting from taking part in the service as it now stands is remarkable.

On Thursday, February 12, 1948, a resolution was passed at an extraordinary meeting of the Metropolitan Branch in the following terms:

"That this meeting of members of the Metropolitan Branch of the British Dental As-

sociation, after consideration of the Proposed General Dental Service under the National Health Service Act, 1946, endorses the action of the Representative Board on January 31, 1948, in respect of that service.

"It further accepts and agrees to carry out the recommendation of the Board, namely, to refuse to enter the service until the Act and its regulations are amended so as to include the principles advocated by the Association as necessary to provide a satisfactory dental service for the nation."

Three hundred and forty-nine voted for the resolution and six against it.—*D. Mag. and Oral Topics.*

A Note from New Zealand

Professor Walsh, Dean of the Faculty of Dental Science, Otago, writes: "Dental problems are very similar to those of Australia: dental caries is equally rampant, the diet is similarly designed to enable all to eat with their false teeth without difficulty. There are the same mothers who bring their sixteen-year daughters to have all their teeth out, "after all they will lose them eventually." Most of the school children have their teeth filled by the school nurses and there are probably fewer deciduous teeth extracted here than in Australia, yet orthodontic troubles are just as plentiful and present the same difficult public health problem. There is the same trouble with illegal practice, "repair shops" flourish in all the main centres and advertise a "Three-hour repair service" in the daily papers."—*British D. Jour.* May 21, 1948.

NEW ZEALAND

Sir Thomas Hunter Gives £10,000 to New Zealand Dental School for Research

To encourage research into dental disease Sir Thomas Hunter, "Father of the New Zealand School Dental Service," has made a gift at the monthly meeting of the Council of the University of Otago in December last, and was warmly thanked for his generosity.

Dean Walsh, who described Sir Thomas as the leader of the dental profession in New Zealand for the past forty years, said that dentistry owed more to him than to any other man in the country. His generous gift was an example to others.—*D. Mag. and Oral Topics.*

AUSTRALIA

Here Comes the Flying Dentist

Even in the depth of the Australian bush you can't keep on putting off that appointment with the dentist. For the man with the forceps has grown wings. Here is the story of a new development, Australia's first aerial dental service, and of the man who made a success of it.

by H. BOWDEN FLETCHER,
Sydney, Australia

Outback Australians have got used to flying salesmen and flying stock agents. Now they are welcoming something new in the flying line—the man who comes by air to give them gas.

First flying dentist in the Commonwealth is young Johnnie Homewood who served for five years in the Royal Australian Air Force.

When the war ended he made a quick survey and found that in New South Wales alone there were 40 towns and townships where no dentists lived or called. Already holder of an "A" flying licence, he bought a Tiger Moth from the Disposals Commission and set about becoming "town dentist" to 40 places at once.

In the plane he has, for the past 18 months, been regularly visiting such centres as Warren, Gulargambone, Yeoval, Mungindi, Lightning Ridge, Tennant's Creek, Katherine and Daly Waters. He found these were all he could manage with reasonable efficiency as a visit at least every three months was found to be an essential minimum.

He has since induced a couple of other keen dentists to join him and, having had one of them taught to fly, he has secured another Tiger. With this combination he has increased his field of service.

By careful selection of itineraries urgent dental treatment is taken to many hundreds of bush people.

NOW HE'S MOVED NORTH

Johnnie's two partners fly together in one machine to the first centre on the tour. There the non-pilot is dropped and the other one flies on to the second town on the list. They remain for a predetermined time after which the pilot picks up his mate and the pair fly on to the next couple of towns on the schedule.

The average stay in a town is two weeks.

Having organized the new team to take over the work in New South Wales, Homewood has moved north to Darwin. From his base there he is doing a round of the station

properties and the small mining settlements through the Territory. When he first reached Darwin the town had been without a dentist for more than six months.

Many of the centres served by these three flying dentists are 100 miles from any resident dentist.

When on the rounds a full range of hand instruments for operative work, outfit for making and casting gold fillings, surgical instruments for dealing with oral surgery cases, portable electric drill, adaptable for either direct or alternating current and a hand-operated drill for places where there is no current, are carried. This enables completion of all work on the spot even to the making of artificial dentures.

TAXIES ALONG ROADS

Safety of the aircraft is naturally the vital factor of the service. When the men visit a centre where there is no hangar they taxi the Tiger along the bush roads to the nearest garage, where it can be housed with folded wings! If no garage is available a suitable shed can usually be found.

One experience has made Homewood careful about leaving a machine outdoors: A storm blew up about 2 a.m., broke his plane's moorings, and lifted it 125 yards back from where

it had been pegged. It had, according to the skid marks, been blown backwards and for a distance of about 25 yards had actually flown.

It was not damaged.

BUSH CHILDREN'S BAD TEETH

The work is fascinating and puts some excitement into dentistry, Homewood says. He is sometimes called on to fly the local doctor or bush nurse out to isolated patients. And there have been times when neither doctor nor nurse has been available and the flying dentist has had to be a flying doctor.

The tragedy of neglected teeth is encountered by Homewood each week. In some of the small outback settlements he has found many children of 13 and 14 with not a tooth that is not carious and beyond repair.

Just imagine the boon the flying dentist is to a place like Lightning Ridge, where the only relief from toothache was to let a local 6 ft. 6 in. opal miner pull it out! Homewood's best tribute from the township came from a man who said: "If I knew the tooth that was going to ache next I would have it out now."

Among other things these flying dentists do it to give a helpful refresher course to local medicos and bush nurses, so that these workers can perform emergency dental work.—*Reuter Features Ltd.*

GENERAL NEWS

Dominion Dental Council

At the meeting of the Dominion Dental Council held at Murray Bay, Quebec, in June, the following officers were elected:—

President: Dr. H. L. Freeland, Calgary, Alta.

1st Vice-Pres.: Dr. F. C. Bonnell, Saint John, N.B.

2nd Vice-Pres.: Dr. W. C. Oxner, Halifax, N.S.

Sec.-Treas.: Dr. A. J. Brett, Regina, Sask.

Dr. Cameron Honoured

Dr. George L. Cameron, Special Dental Adviser, Department of Veterans Affairs, Ottawa, has recently been honoured by the award of a Fellowship in the International College of Dentists.

Doctor Cameron, a Past President of the Canadian Dental Association and an Honorary Member of the British Dental Association, served as Deputy Director-General Dental

Services at National Defence Headquarters in the rank of Colonel during World War II. He served as a combatant officer in World War I and formerly practised his profession at Swift Current, Saskatchewan.

Approval of the Harvard School of Dental Medicine

The Council on Dental Education of the American Dental Association has announced the full approval of the Harvard School of Dental Medicine. It will be observed that the committee was careful to recommend that the school should not be recognized as offering a pattern for other dental schools to follow. The mere cost per student of the Harvard plan would be prohibitive for any other school in America, since no other school is as fortunate as Harvard in its endowment for dental education.

The method of instruction, mainly tutorial,

obliges the school to accept only fifteen new students each year. The effort to carry on all of the clinical instruction, both scientific and practical, in the last two years of the course is unique and must prove its way through experience. Since Harvard is not undertaking to turn out dentists in numbers to meet current demand, it is hoped that her splendid resources, her fine facilities and her accomplished faculty, with extensive provision for coupling teaching and research, will result in graduates who may be expected to engage in dental teaching and research.

It is gratifying to be assured that the Council's requirements are flexible enough to permit recognition of this notable experiment in dental education.—Editorial in *Jour. of A.D.A.*

U.S.A. Congress Votes \$1,000,000 for Topical Fluoride Demonstrations

Projects demonstrating topical fluoride therapy as a preventive measure in the control of dental caries will be established in each state of the nation during the next year under a program authorized by the 80th Congress. A total of \$1,000,000 to finance the organization of field demonstration units in co-operation with state health departments was included in the annual appropriation bill for the United States Public Health Service.

Topical applications of a solution of sodium fluoride to the teeth of children up to 15 years of age have been recommended by both the Council on Dental Health and the Council on Dental Therapeutics of the A.D.A. The establishment of demonstration units in each of the 48 states is expected to result in an expanding use of this preventive measure in all sections of the nation.—*A.D.A. News*

Budget of American Medical Association

It is reported in *Medical Economics* that the American Medical Association with assets exceeding \$8 million had a surplus in 1945 of \$990,000 but last year showed a deficit of \$70,000 which resulted in a 50 per cent raise in dues and subscription rates.

To cope with expanding headquarters activities seventy new employees had to be taken on in the past year bringing the total to 707. The Association's wage and salary outlay last year surpassed its 1945 expenditure by \$1,005,522.

Urges Local Control of Topical Fluoride Programs in U.S.A.

A recommendation that local and state dental societies be consulted in the development of topical fluoride treatment programs proposed by the United States Public Health Service was made by Dr. Allen O. Gruebbel, secretary of the A.D.A. Council on Dental Health, in a recent appearance before a subcommittee of the Appropriations Committee of the House of Representatives at Washington, D.C.

The U.S. Public Health Service has requested Congress to appropriate \$2,680,000 for a nation-wide program to encourage the use of topical fluoride therapy among children. The appropriation request included \$1,000,000 for the organization of field demonstration units in conjunction with state health departments; \$180,000 for publicity and promotion programs through professional societies and public health agencies; and \$1,500,000 for grants-in-aid to states to publicize and promote the use of topical fluorides.

Pointing out that both Council on Dental Health and the Council on Dental Therapeutics of the A.D.A. have approved topical fluoride solution for children as a caries control measure, Dr. Gruebbel urged that administration of the proposed program be decentralized so that local dental societies will participate directly in its operation. Dr. Gruebbel also recommended that all health education material, publicity releases, and other information designed for the public be screened carefully to prevent the distribution of misinformation.

Voluntary Group Health Insurance

"Those who still insist that voluntary group health insurance will never be more than a drop in the bucket, so far as the total need is concerned, ought to take another look at the most recent reports from the Wisconsin Blue Cross plan and the two Wisconsin Blue Shield medical and surgical care prepayment plans. Here are just a few highlights:

"Wisconsin's Blue Cross hospital plan has been growing at the rate of 20,000 participants a month. The two nonprofit medical-surgical prepayment plans, Milwaukee Surgical Care and Wisconsin Physicians Service, have been growing at the rate of 8,800 a month, though the latter organization is still in its infancy . .

"If those who control and administer these voluntary non-profit plans demonstrate that the

public welfare will always take priority over selfish interests, progress has only just begun. They will have to show, however, that they are just as interested in offering more protection at less cost as they are in getting more members or in boosting salaries or hospital incomes or professional fees. They will have to show constant vigilance against hidden abuses that would destroy the public confidence. They will have to realize that those who pay the bills—the members of these plans—have a right to know every aspect of their operations, their mistakes and their failures as well as their successes.

"It is a great responsibility that grows greater as additional thousands place trust and put money in these Blue Cross and Blue Shield plans. But it is a venture which, rightly administered, can return vast benefits to the hospitals and physicians, to patients and the public."

Editorial, "Thousands Join Health Plans," *Milwaukee J.* 66:16 March 15, 1948, per Public Health Economics.

Dr. Bortz Asks Change in Health Control

Dr. Edward L. Bortz, president of the American Medical Association, asked April 2 for a re-examination of the nation's health and disease control activities. He declared the trend of modern medicine is toward a "comprehensive health service" to coordinate all phases of caring for a sick or needy population.

Dr. Bortz addressed the final session of the Eastern States Health Education Conference sponsored by the New York Academy of Medicine . . . Two hundred health educators, representing public, private and voluntary health organizations in six states, attended the two-day meeting.

He advocated a new approach to health problems based on the concept that good health is more than mere absence of disease. "Full and happy life for all persons should be the primary goal," he continued. "This might be achieved through community health centres and health instruction in schools. I visualize health programs in our educational institutions throughout the nation, which will stress the basic essentials in life science and will enable each boy and girl to attain optimum maturity. Industry and labour are making strides in the field of preventive medicine.

Here and there leaders with vision are setting up recreational programs for armies of employees. Medical leaders are exploring the possibility of prophylaxis and prevention for common ailments. The health centre in the community is an excellent unit wherein professional leaders in medicine, education, and civic groups may study community needs for the conservation of health and the eradication of disease."

"There are three immediate objectives for a comprehensive health program," Dr. Bortz said. They are extension of the teaching program on health subjects in the schools, expansion of prophylaxis and sanitary measures to all elements in each community and increased emphasis on instruction in "social medicine" in medical schools. One of the major deficiencies in medicine, according to Dr. Bortz, is the "limited approach with which the majority of the profession interprets current problems."—"Change Advocated in Health Control," *New York Times* 97:17 April 3, 1948, per Public Health Economics.

A.D.A. Comment on Drew Pearson Article

Judging by the large number of inquiries received in the Central Office of the American Dental Association, thousands of dentists probably were asked to explain the comments on topical fluoride therapy that appeared in Drew Pearson's syndicated newspaper article March 5. The article dealt with a Congressional committee hearing on providing grants-in-aid to states for aiding in financing topical fluoride programs in communities that wish to establish such programs for children.

The article confused the public and disturbed the dental profession because it made some preposterous and totally unwarranted claims. The most glaring error dealt with the alleged testimony of public health officials "that sodium fluoride could be . . . painted on children's teeth four times in their lives . . . after which most of them could virtually forget about going to the dentist." Actually, sixteen separate treatments are required to obtain 40-50 per cent reduction in caries incidence. The investigators recommend four treatments spaced about a week apart during the ages 3-7-10-13. The assumption that the treatment will permit children to virtually forget about going to the dentist is illustrative of the false concept of many people that caries is the

only dental disease with which children and their parents need to be concerned . . .

Dentists in every community should take suitable steps to counteract inaccurate statements about fluoride therapy. The Central Office of the A.D.A. is preparing news releases and other educational material to aid in giving the public the facts and in preventing widespread disillusionment."—A.D.A. Council on Dental Health, News Letter 4:1 March 31, 1948.

Sen. Thomas Proposes Federal Aid for Dental Education in U.S.A.

Direct Federal government grants to schools of dentistry, medicine, nursing and public health and the award of scholarships to students on a merit basis are proposed in a new bill introduced in the United States Senate. Principal provisions of the bill called for annual grants of \$8,000,000 to dental schools; \$20,000,000 to medical schools; \$18,000,000 to nursing schools; and \$2,000,000 to post-graduate schools of public health. Additional grants may be made up to 50 percent of the cost of new construction of educational facilities. The bill provides that dental schools, to qualify for Federal aid, must not impose unreasonable restrictions against the admission of out-of-the-state residents and must not bar students on the basis of race, colour, national origin or creed. Applicants accepting national scholarships would be required to promise to spend one year in Federal service or in an area where there is a shortage of physicians for each two years of the scholarship. State scholarships would be limited to tuition and books. National scholarships would include \$90 monthly expense allowance.—*A.D.A.*

\$2,750,000 Dental Research Bill is Approved by U.S.A. Congress

Climaxing an eight-year campaign by the American Dental Association, the United States Congress on June 14 voted full approval of the dental research bill sponsored by Rep. Walter E. Brehm and sent the measure to the White House for President Truman's signature. The bill, as voted by Congress, provides \$2,000,000 for the immediate construction and equipment of a dental research building and laboratory as part of the National Institute of Health and \$750,000 for the first year's operation of a research program.

In addition to the appropriations of \$2,750,000, the measure provides that the dental research institute shall be operated under the direction of the Surgeon General of the U.S. Public Health Service in consultation with a National Advisory Dental Research Council consisting of 12 appointed members and the medical chiefs of the Army, Navy and Veterans' Administration. The bill provides that at least four of the twelve appointed members shall be dentists. The measure also provides for the training and instruction of research workers at the dental institute and for the awarding of research grants to dental schools and other institutions. All types of dental research will be permitted under the general provision which declares the purpose of the Act is "to improve the dental health of the people of the United States through the conduct of researches, investigations, experiments and studies relating to the cause, diagnosis and treatment of dental diseases and conditions; assist and foster such researches and other activities by public and private agencies; provide training in matters relating to dental diseases and conditions; and promote the co-ordination of all such researches and activities and the useful application of their results, with a view to the development and prompt widespread use of the most effective methods of prevention, diagnosis and treatment of dental diseases and conditions."—*A.D.A. News.*

Name Full-Time Secretary for Iowa Society

The Iowa State Dental Society has named Dr. H. I. Wilson of Rockwell, as full-time secretary. Action by the Iowa Society brings to a total of twelve the number of A.D.A. constituents employing full-time secretaries to administer society affairs.—*A.D.A.*

Launch New Survey of Toothbrushing Habits of Americans

A new survey of the toothbrushing habits of a group of American families will be conducted during the summer months by the J. Walter Thompson Company, national advertising agency, in cooperation with the A.D.A. Researchers assigned to the project hope to determine the number of persons who use a toothbrush, the frequency with which they use them, and the actual efficiency of the brushes now in use.

The Dental Library of Mount Scopus

*Condensed from Editorial in Refuat Hashbaim,
Jour. of the Palestine Dental Assoc.*

There can be no professional progress without professional books and journals. This well known axiom was realized by the first group of qualified dentists, who settled in Palestine as pioneers at the end of the first World War. Remote as they were from centres of cultures, working under extremely primitive conditions, they were nevertheless resolved to establish the dental profession in Palestine on as high a level as possible.

Our help came from our American brethren, whence our medical help has come ever since that time.

First came the medical library. It was started shortly after the war—in 1920 by Dr. Julius Jarcho, a prominent physician of New York City.

As a matter of fact, no single person has ever collected and built up a medical library of such dimensions. This library is now the largest and richest of its kind in the Middle East, with the possible exception of Egypt, which possesses a large collection of all manuscripts and medical antiquities.

The library contains approximately 50,000 volumes, and in addition to all sorts of booklets and reprints, it receives about 300 periodicals in many languages.

This library is affiliated with the National-University Library on Mount Scopus, and is well equipped to meet the growing requirements of medical research and all scientific work connected therewith.

The dental library, which is a branch of the medical, also owes its existence and development to private initiative—its benefactor being Dr. Henry Wachtel, a well-known dental surgeon practising dentistry the last forty years in the city of New York.

To begin with, he dispatched his own library, which he had been collecting for years, to Jerusalem. He began sending out systematically books and journals, which he had purchased, subscribed for or collected from colleagues and societies.

Only recently a parcel of a hundred and ten very valuable dental books, published in America during this war, was received from Dr. Wachtel.

Dr. Hans Moral, Professor of Dentistry at Rostock University, Germany, was a rare collector of dental literature. His private library

contained the most important books in the field of dentistry.

When he could no longer endure the humiliation of the Nazis, he gave up his life, but he would not give them his beloved library. In accordance with his will, his brother Kurt dispatched his collection in good time, before the Nazis could lay their hands on it, to Jerusalem, direct to the National University library.

Prof. Gottlieb of Vienna, now in America, has shown especial interest in Palestine dentistry all these years, and since 1931 began to lend a helping hand in the collection of dental literature in central Europe for our library.

Prof. Gottlieb succeeded in bringing over to Palestine his rich private library from Vienna even at the time that Vienna was dominated by the Nazis.

In accordance with his wish, this library has been designated to the future dental college at the Hebrew University. Recently Prof. Gottlieb has aided in collecting a great number of professional books and journals in America, donated by our colleagues and friends there. These publications are now being shipped to Jerusalem.

It is our hope that, with the active participation of our colleagues in Palestine and all over the Diaspora, we shall attain a dental library, to which the dental profession can point with pride.

DR. M. GLASSMAN.

President Truman Pledges Support of A.D.A. Dental Health Program in Conference with Dr. H. B. Washburn

In a special conference with Dr. H. B. Washburn, A.D.A. president, at the White House on May 19, President Harry Truman pledged his support of the three-point A.D.A. program of increased dental research, expanded dental health education, and the extension of dental care to greater numbers of people. President Truman expressed his particular concern for providing adequate health services to the middle group of citizens between the indigent and the high-income groups. The President said that he felt that this large group is trapped to a great extent by the high cost of living generally, leaving inadequate funds for necessary health services. Dr. Washburn pointed out the importance of consulta-

tions with the dental profession in the planning of measures designed to extend health services. Dr. Washburn said that the A.D.A. is ready to cooperate in such planning but that the Association would like to be consulted in the beginning of such planning rather than be called in after the plans are completed and

ready for Congressional action. President Truman agreed with this point of view and pointed out that members of the dental profession attended the recent National Health Assembly at Washington, May 1 to 4, where 10-year health goals for the nation were formulated.

IN MEMORIAM

Charles Henry Juvet, of Ottawa, Ontario, died April 7. He was graduated from the Royal College of Dental Surgeons of Ontario in 1903.

He was a member of the Ottawa Dental Society and the American Society of Orthodontists. He belonged also to the Civil Service Lodge, A.F. and A.M. and the Rose Croix.

Dr. Juvet is survived by his widow, one son, one daughter and two grandchildren.

Renneslaer Wilkinson Hunt, of Toronto, Ontario, aged 90, died June 22. He was graduated from the Philadelphia Dental College and for a time practised in Port Perry and later in Hamilton. He was on the Empress of Ireland when it was sunk in 1914. Following his recovery he practised in Toronto until his retirement.

During the Northwest Rebellion, Dr. Hunt fought at the Battle of Batoche with the Port Hope Rifles. In his younger days he was active in sports. He was a lacrosse player and skipped a curling team which won the Dominion championship. He was past president of the Hamilton Gun Club and a member of the Victoria Curling Club, Hamilton. He was an Anglican.

Dr. Hunt is survived by his widow, a daughter and a grandson.

Robert James McGahey, of Toronto, Ontario, died June 11. He was graduated from the Royal College of Dental Surgeons of Ontario in 1897, and had practised in Toronto for 44 years before his retirement in 1941.

He was one of the early members of Holy Name Roman Catholic Church and a member of the Knights of Columbus and the Holy Name Society.

Dr. McGahey is survived by two daughters, and two sisters.

Robert John Davidson, of Vancouver, B.C., aged 30 years, died May 27 from injuries received when the car in which he was riding was struck by a heavy truck four days earlier.

He had just completed a course in dentistry at the Oregon Dental College and would have graduated June 17. He was graduated from the University of British Columbia with the degree of Bachelor of Commerce in 1939, won a social work diploma in 1940 and the degree of Bachelor of Arts in 1941. He was affiliated with the Beta Theta Pi Fraternity. Following graduation he worked for the provincial health department and as an attendance officer for the Vancouver School Board, prior to enrolment in the dental college.

Dr. Davidson is survived by his parents, a brother and a sister.

George H. Kent, of Montreal, Quebec, aged 73, died suddenly June 14. He was graduated from Laval University in 1897 and for 20 years after that he taught dentistry at the University of Montreal. He then went into private practice and took over the dental work at the Verdun Hospital. He was a former member of the Knights of Columbus in Montreal.

Dr. Kent is survived by his widow, a son, two daughters, three brothers, two sisters and two grandchildren.

William Ross Rodger, of Fergus, Ontario, died at his home on May 18, 1948.

He was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1910.

Dr. Rodger has been retired from practice for some years.

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LA NUTRITION ET LA CARIE

Par ANTONIO RENY, B.A., D.D.S., Québec

(Suite et fin)

Certaines personnes ne peuvent, pour une raison ou pour un autre, boire la quantité de lait nécessaire pour satisfaire à leur métabolisme en calcium; il existe, sur le marché, un nombre presque indéfini de produits pharmaceutiques, à base de Ca, qui peuvent y suppléer. Pour connaître la quantité requise, il suffit de lire sur l'étiquette, le nombre de grains que chaque comprimé contient et de faire le calcul.

CONCLUSION

Pour résumer la question calcium, disons: 1) Comme, d'une part, une dent bien calcifiée résiste d'avantage à la carie, et que, d'autre part, ce tissu est composé presque exclusivement de sels minéraux, une diète riche en calcium est absolument nécessaire durant la formation de cette dent. 2) La calcification dentaire commence à se manifester dans la sein maternel, mais à cette période, la danger de déficit est moindre qu'après la naissance. 3) Durant l'allaitement la quantité requise est suffisante. 4) C'est durant l'enfance que le danger de déficit est le plus grand. 5) Une chopine de lait est la quantité recommandée, à un adulte, pour sa diète journalière; une femme enceinte et celle qui nourrit doivent en boire une pinte tous les jours, de même qu'un enfant âgé d'environ de 10 ans; cette quantité sera évidemment moindre

s'il est plus jeune. 6) La valeur biochimique du calcium dans la salive, a été étudiée, sans donner de résultats appréciables.

Le Phosphore.—Les fonctions du phosphore sont semblables, en plusieurs points, à celles du calcium, mais le danger de déficit est moins grand dans son cas, car, en plus du lait et du fromage, les oeufs et les viandes en contiennent une très grande quantité.

Cependant, en plus des fonctions du calcium, le phosphore possède les propriétés suivantes: 1) Il forme une partie intégrale de la structure nucléaire de chaque cellule et est intimement relié à leur multiplication. 2) Il est l'élément inorganique le plus largement distribué du corps humain.

Ce que nous avons dit du calcium, en ce qui concerne les besoins requis dans l'organisme, s'applique au phosphore.

Vit. A.—La vitamine A est nécessaire à la formation normale de tout le tissu épithélial. Sa carence produit un tissu épithélial moins résistant; c'est ainsi, par exemple, que l'épithélium nasal aura tendance à avoir une forme squameuse, au lieu de la forme cilière nécessaire à la sécrétion normale des fosses nasales. Son insuffisance provoque une maladie spécifique, la xérophthalmie et elle peut causer aussi des troubles au tissu épithélial des reins, des poumons, etc.

Cette vitamine intéresse le dentiste. Pourquoi? Rapportons-nous à l'histologie dentaire et nous verrons que l'émail est formé de tissu épithélial; en effet, la formation du sac adamantin provient du tissu épithélial, qui, à un moment donné, s'invagine dans le tissu conjonctif, déclanchant ainsi le mécanisme qui donnera naissance à la dent.

Isaac Schour (26) a fait une étude approfondie sur des dents de rats en voie de formation, et il a trouvé que l'avitaminose A produisait les anomalies suivantes: 1) changement caractéristique dans l'organe de l'émail. 2) désordre dans la calcification de la dentine. 3) éruption retardée, et dans les cas graves, l'éruption peut même cesser complètement. 4) émail hypoplasique. Schour termine ainsi: "The presence of vit. A is essential to the differential growth of the odontogenic epithelium and of the formative cells; and thus is essential to the entire process of tooth formation."

Boyle (27) a examiné les incisives d'un enfant de 3½ mois qui avait souffert d'avitaminose A. et il a noté que: 1) les améloblastes et le stellate réticulum étaient remplacés par une ligne d'épithélium squameuse. 2) la dentine était mal calcifiée.

La vitamine A est calculée en Unité Internationale et l'U.I. de la vit. A est l'activité produite par 0.00008 mg. de carotène (pigment jaune contenu dans les légumes verts et jaunes).

Les principales sources de la vit. A, sont: le lait, le beurre, le foie, les légumes verts et jaunes.

Un verre de lait contient environ 500 U.I. de vit. A

Une once de beurre contient environ 1400 U.I. de vit. A

Une once de foie contient environ 2800 U.I. de vit. A

Une demi-tasse d'épinards contient environ 16000 U.I. de vit. A

Une demi-tasse de carottes contient environ 2000 U.I. de vit. A

Quantité requise.—D'après Chaney (28) un adulte a besoin, chaque jour, de 100 U.I. de vit. A par 100 calories; et comme 3000 calories sont nécessaires à un homme pesant environ 150 lbs, il requiert donc

la même quantité de vit. A soit 3000 (U.I.). J. D. Boyd (29) recommande, dans la diète journalière, d'un adulte, entre 3000 et 8000 U.I. L'enfant, la femme enceinte et celle qui nourrit, en ont besoin d'une plus grande quantité; Rose (30) prétend qu'un enfant a besoin d'environ 200 U.I. par 100 calories. Ainsi un enfant de 7 à 8 ans doit en prendre près de 2000 unités, tous les jours.

Le Dr Sylvestre, chef de la division de la nutrition, au ministère de la Santé, recommande, en plus du lait les quantités de légumes que voici:

Pour la mère, durant la grossesse et l'allaitement, une portion de légumes verts (laitue, choux, pissenlits, pois verts, etc.) où de légumes à pigments jaunes (carottes, courges, etc.) mangés crus aussi souvent que possible; une ou deux portions de légumes cuits (quotidiennement).

Pour l'enfant, une ou deux portions de légumes, dont la grosseur augmentera suivant l'âge et l'appétit de l'enfant; ou au moins, 2 ou 4 fois par semaine, au choix: des légumes verts, (pois, haricots, asperges, etc.). B) des feuilles vertes (épinards, feuilles de betteraves, de navets, etc.). C) des légumes à pigment jaune (carottes, courges, navets et pois jaunes, etc.)

Vitamine B.—Je ne crois pas qu'on ait trouvé, à date, de rapport entre l'avitaminose B et la calcification. Quelques auteurs ont prétendu que cette vitamine aurait une influence physico-chimique contre le microbe de la carie. Ross, Price et Pederson (31) croient que le fait du raffinage et de la mouture enlève la vit. B des grains ou des céréales, et rend ces derniers plus susceptibles à la fermentation au contact de la salive.

Vitamine C.—Le principe anti-scorbutique a été isolé (32) sa structure est connue depuis longtemps; on lui a donné le nom d'acide scorbutique ou vit. C.

Les nombreuses fonctions de cette vitamine sont 1) d'être essentielle à la formation du ciment intercellulaire. 2) d'agir comme enzyme dans l'oxydation des cellules du corps humain. 3) de présider à la synthèse normale des globules rouges. Elle rendrait le corps plus résis-

tant à la toxine diphtérique. De plus, Sherman (33) prétend que le besoin de la vit. C augmente dans les cas de rhume, tuberculose, fièvre rhumatismale, et probablement d'autres maladies, de même que durant la grossesse et l'allaitement.

L'avitaminose C produit différents troubles dans l'organisme, dont le principal est le scorbut. Mentionnons aussi: 1) L'arrêt dans la nutrition des capillaires et la désorganisation de leurs parois. 2) Hémorragie dans plusieurs parties du corps. 3) Malformation des extrémités osseuses. 4) Hypertrophie cardiaque. 5) Dégénérescence des fibres musculaires. 6) Anémie due à la destruction des cellules formatrices du sang dans la moelle osseuse. 7) et enfin, perte de calcium.

La dent, à son stage de formation, a un grand besoin de cette vitamine; car l'avitaminose produit des troubles sérieux dans la calcification de chacun des tissus de la dent. Isaac Schour (34) cite les anomalies suivantes: Malformation des améloblastes, des odontoblastes et des cémentoblastes; déposition de dentine dans la pulpe et hypercalcification de la pré-dentine.

Les troubles de l'avitaminose C ne se limitent pas à la dent; ils affectent aussi les tissus environnants. Les premiers symptômes du scorbut apparaissent sur la gencive. Les troubles moins graves produisent la gingivite. Rose (35) les définit de la manière suivante: 1) anémie de la muqueuse gingivale. 2) Saignement et atrophie des gencives. 3) Résorption du tissu alvéolaire (probablement due à la désorganisation des ostéo et des fibroblastes.) et enfin 3) ébranlement et chute des dents.

Quelle est la quantité de vit. C nécessaire dans le métabolisme du corps humain. D'après Chaney (36) le minimum requis pour les bébés est de 10 mg. journellement; de 20 mg. pour les enfants et de 50 mg. pour les adultes.

Dans l'organisation d'une diète, il ne faut pas oublier que la vit. C est facilement détruite par l'oxydation et la chaleur. McHenry (37) prétend que la perte par l'oxydation peut varier entre 10 et 20%. Tandis que la cuisson peut réduire sa valeur de 50%.

Les meilleurs sources sont les fruits et les légumes, surtout les premiers. Les oranges contiennent environ 50 mg. de vit. C par 100 gr. de pesantier. Ainsi une orange moyenne contient approximativement 100 mg. de vit. C; le jus d'orange (un demi-verre), environ 50 mg.; de même pour demi-verre de jus de tomate. Les pommes de terre en sont une excellente source.

La diète quotidienne semble contenir, chez toutes nos familles, une quantité suffisante d'acide ascorbutique, pour subvenir au besoin de l'adulte. Il se fait une grande consommation de pomme de terre, durant toute l'année. La demande de fraises, de bluets et de framboises est très grande pendant la saison des fruitages; ces aliments sont riches en vitamines C et conservent leur teneur longtemps après leur mise en conserve. Cependant durant l'enfance et l'adolescence, le danger de déficit est plus grand, aussi leur recommande-t-on, tous les jours, un jus de fruits, ou son équivalent, à partir du premier mois après leur naissance.

Vitamine D.—L'avitaminose D est peut-être la principale cause de l'hypocalcification des dents. Cette vitamine est essentielle à l'absorption et l'utilisation des sels minéraux dans l'organisme. Ses fonctions sont en relation très étroite avec celles de la glande parathyroïde.

Isaac Schour (38), après avoir énuméré les mauvais effets, causés par l'hypo-fonction de la parathyroïde sur des rats, hypo-fonction provoquée par l'ablation de cette glande, nous dit que le fait de leur administrer des extraits glandulaires, arrête l'hypocalcification osseuse et dentaire; et il ajoute ceci: "Similar results are obtained when vit. D is administered instead of parathyroid extracts." J. D. Boyd (39), dans un article sur le métabolisme du calcium et du phosphore, nous dit que pour l'absorption normale de la chaux, il est nécessaire que la vit. D soit présente dans l'organisme. Il ajoute que l'absence de cette vitamine, diminue, à un tel point, l'absorption du calcium dans l'intestin, que l'excrétion par voie urinaire peut cesser complètement; et la quantité totale apparaît dans les selles, non digérée.

La vit. D est essentielle à l'utilisation des sels minéraux dans l'organisme. Pour que la calcification soit normale, la quantité de Ca. dans le sang doit toujours être constante. (10 mg. par 100 cc.) et la vit. D est nécessaire à son maintien. Des expériences ont prouvé que, dans les cas de déficit très prononcé en calcium, une diète riche en vit. D maintiendra la quantité normale dans le sang aussi longtemps que la réserve dans l'os n'aura pas été épuisée. (40)

L'avitaminose aura donc le même effet sur les dents en voie de formation que le déficit en calcium; émail et dentine (41) ramollies; zones inter-globulaires imparfaitement calcifiées, etc.

Quantité requise.—Nous avons vu, en traitant du calcium, que la thérapeutique des sels minéraux, pendant la grossesse, semblait avoir peu d'effets sur la calcification des dents du fœtus; de même sur celles du bébé durant l'allaitement. C'est le contraire en ce qui concerne la vit. D. Si la mère enceinte veut être en mesure de donner à son enfant une dentition solide, elle doit voir à ce que sa diète soit riche en vitamines, surtout la vit. D. La quantité requise est assez difficile à établir. Le Mulberry Health Center de New York (42) recommande à la future mère de prendre, tous les jours, une cuillère à thé d'huile de foie de morue ou son équivalent, soit en nourriture irradiée ou en concentrée, telle que le viostérol, le calci-férol, etc.

Le lait de la mère ne contient presque pas de vit. D (43). Voilà pourquoi il est important que les bébés commencent à en prendre, dès les premières semaines, après leur naissance. Quelques gouttes d'huile de foie de morue, au début, en augmentant la dose jusqu'à l'âge de 3 ou 4 ans. (2 à 3 c. à thé)

Durant la période d'âge scolaire, les besoins peuvent varier avec le lieu d'habitation, le climat et la manière de vivre des individus; mais je crois qu'il est prudent de donner à l'enfant, durant la saison froide, un peu d'huile de foie de morue, ou d'autres produits semblables. D'après Shermann (45) un enfant de 5 à 6 ans a besoin, journallement d'environ 300 à 400 U.I. de vit. D. Il peut peut-être ab-

sorber la quantité nécessaire durant les mois d'été, mais il y a certainement danger de déficit pendant les mois d'hiver.

Pour résumer ce qui précède sur les vitamines, disons: 1) que les vit. A.C. et D jouent un rôle important durant la calcification dentaire. 2) L'avitaminose A. C. et D. est beaucoup plus à craindre que le déficit du calcium, pendant la grossesse et l'allaitement, en ce qui concerne l'hypocalcification des dents. 3) Pendant l'enfance et l'adolescence, une diète bien balancée, et riche en calcium et en vitamines est nécessaire pour former des dents bien calcifiées.

CONCLUSIONS

Le manque de calcification des dents prédispose à la carie; tout le monde est d'accord sur ce principe. Là où il y a eu confusion c'est sur les moyens de prévenir l'hypocalcification. Il ne faut pas oublier que la dent n'est pas un tissu osseux, elle possède un mode de formation et un métabolisme absolument spécifique; donc un genre de calcification, qui lui est propre. Cette constatation ne diminue, en rien, l'importance de la nutrition en ce qui concerne la carie dentaire; au contraire, son importance est d'autant plus grande qu'elle est pratiquement limitée au stage de la formation des dents. Parce que l'émail et la dentine ont un pouvoir de résorption et d'absorption secondaire beaucoup plus restreint que celui du tissu osseux, le manque de calcification, au stage de leur formation, est plus grave dans le premier cas que dans le deuxième.

Quels sont les devoirs du dentiste vis à vis cet aspect de la carie dentaire? Est-ce que nous devons nous occuper et corriger, si nécessaire, la diète de nos clients? faire les analyses requises afin de s'assurer si tel sujet absorbe, en quantité suffisante, calcium et vitamines? etc. Je ne le crois pas. C'est une spécialité de la médecine qui regarde plutôt le spécialiste en hygiène et en nutrition. D'ailleurs, le dentiste n'a pas assez de temps à sa disposition pour poursuivre ce travail avec efficacité. Il est avant tout un chirurgien, et comme tel, il doit, surtout s'occuper de corriger les mauvais effets de la carie au

moyen de la chirurgie opératoire. De plus, nous n'avons presque pas de contact avec la population au stage le plus important de la calcification des dents. Ajoutons, enfin, que pour être efficace, la diète d'un individu doit être suivie pendant une très longue période, et plus spécialement en ce qui concerne la calcification dentaire, elle doit s'étendre de la période pré-natale et jusqu'à l'adolescence. C'est toute une organisation qui regarde beaucoup plus le spécialiste en hygiène et ceux du service de santé que les membres de notre profession.

Est-ce à dire que nous devons nous désintéresser complètement de ce problème; loin de là. Je considère que le dentiste doit avoir des connaissances approfondies en nutrition, afin d'être en mesure de diagnostiquer les symptômes buccaux de la malnutrition, d'avertir son patient et le diriger vers les spécialistes en la matière. Il est de notre devoir aussi de renseigner les autorités concernées et la population en général sur l'importance de la diète en rapport avec la dentition et sur les précautions prendre pour prévenir l'hypocalcification dentaire.

BIBLIOGRAPHIE

1. Boyd J. D.—Dentistry for Children p. 302; 1939.
2. Schour, I.—Dental Sc. and Dental Art. P. 24, 1938.
3. Thoma K. T.—Clinical Pathology of the Jaws, C. S. Thomas, Springfield 1934.
4. Albright F. & Bauer W.—Jour Ame. Med. Ass. 102, 1276; 1934.
5. Gordon S.M.—Jour. Am. Dent. Ass. 23, 139; 1936.

6. 7. Schour, I.—Dental Sc. & Dental Art; 95, 87; 1938.
8. Bodeker C. F.—Dental Cosmos; 71, 586; 1929.
9. Gies W. I. & Heft H. L.—Jour Nat. Dent. Ass. 5, 527; 1918.
10. Fish, E. W.—London, John Bale Sons; Damelson Ltd, 1932.
11. Karshan M.—Dental Sc. & Dental Art, 344, 1938.
12. Fleming.—Jour. Dent. Res. 10, 33, 1930.
13. Joy, P.—Dental Cosmos, 69, 977; 1927.
14. Wallace J. S.—Brit. Dent. Jour. 27, 1, 67, 106, 151; 1906.
15. Rosebery.—Jour. Dent. Res. 13, 379, 1933.
16. Karshan.—Jour. Dent. Res. 14, 445; 1934.
17. Koehne M. Bunting R. W.—Am. Jour. Dis. Child; 48, 6; 1934.
18. Osborn T. W.—Jour. Dent. Res. 16, 165, 545; 1937.
19. Rose M. S.—Fondation of Nutrition; 290; 1939.
20. Sherman H. C.—Food & Health N.Y. 156; 1934.
21. Hees A.—Dental Cosmos; 74, 1053; 1932.
22. Horton K.—Biochem. Jour. 23, 1075; 1929.
23. Bunting R. W.—Jour. Nat. Dent. Ass. 4, 81; 1917.
24. Morrell.—Am. Jour. Dis. Child. 48, 6; 1934.
25. Clark G. W.—Dental Cosmos; 69, 500; 1927.
26. Shower I.—Dental Sc. & Dental Art; 62; 1938.
27. Boyle P. E.—Jour. Dent. Res; 12, 39; 1933.
28. Chaney S. M.—Nutrition; 181; 1934.
29. Boyd J. D.—Dentistry for Children; 314; 1939.
30. Rose M. S.—Nutrition; 181; 1934.
31. Ross, Price, Pederson.—Pamphlets sur vit. par Roche, 1942.
32. Boyd J. D.—Dent. for Child. 314; 1939.
33. Sherman.—Food & Nutrition; 326; 1934.
34. Shower I.—Dental Sc. & Dental Art; 62; 1938.
35. Rose M. S.—Fondaton of Nutrition; 290; 1939.
36. Chaney M. S.—Nutrition, 1939.
37. McHenry.—Prof. of Nutrition; School of Hygiene; U. of Toronto; cours; 1942.
38. Shower I.—Dental Sc. & Dental Art. 84; 1938.
39. 40. Boyd J. D.—Dent for Child. 297; 1939.
41. Shower I.—Dental Sc. & Dental Art; 64; 1938.
42. 43. Chaney M. S.—Nutrition; 286; 297; 1934.
44. Sherman.—Food and Nutrition; 439; 1934.
10. COLLINS, QUEBEC.

Le docteur Sterling V. Mead, à l'Université de Montréal

Le docteur Sterling V. Mead, de Washington, D.C., auteur de plusieurs traités sur l'Anesthésie et la Chirurgie buccales, donnera un cours à la faculté de Chirurgie Dentaire de l'Université de Montréal, du 4 au 9 octobre inclusivement. Il sera accompagné de ses assistants et présentera des leçons théoriques et cliniques.

Ce cours est offert aux dentistes en pratique générale et est limité à 30.

Les frais de scolarité pour ce cours sont de \$65.00, payable en faisant l'inscription. On s'adresse à M. le Doyen, Faculté de Chirurgie Dentaire, Université de Montréal, 2900 ouest Boul. Mont-Royal, Montréal, 26.

Dans le monde dentaire

Faculté de Chirurgie Dentaire

Les examens de fin d'année pour les finissants de la faculté de Chirurgie Dentaire de l'Université de Montréal ont mérité les prix spéciaux suivants:

la médaille du Lieutenant-Gouverneur de la Province: M. Paul Simard.

le prix du docteur Eudore Dubeau: M. Paul Simard.

le prix de l'Association Dentaire Franco-Américaine: M. Paul Simard.

le prix "Théo. Côté": M. Jacques Dolbec.

le prix "Joseph Nolin": M. Richard-Louis Sicotte.

le prix du docteur A. C. Voisard: M. Maurice Bédard.

le prix de la Banque d'Epargne de la Cité et du District de Montréal: M. Vincent Tremblay.

le prix du Collège des Chirurgiens-Dentistes de la province de Québec: M. Paul Simard.

Société de Stomatologie de Québec

Le Conseil de la Société de Stomatologie de Québec pour 1948-1949 se compose des membres suivants: Président: Viger Palmondon; Vice-Président: Jules Hamel; Secrétaire-Trésorier: Louis Bernier; Archiviste: Georges Lepage; Bibliothécaire: René Huot.

Durant l'année, qui vient de s'écouler, la Société a tenu les réunions suivantes:

le 26 août 1947: Dr H. J. Kauffer, New York: "Insensibilisation de la dentine pour la préparation des cavités."

le 20 nov. 1947: Dr Louis Bernier, Québec: "La mécanothérapie dento-faciale."

le 16 déc. 1947: Dr Philippe Hamel, Québec: "Rapport sur le Congrès, "Greater New York Dental Meeting." Dr Viger Palmondon, Québec: "Rapport sur des séances de l'American Academy of Dental Medicine."

le 5 fév. 1948: Dr Gérard de Montigny, Montréal: "Etude radiologique des lésions osseuses des maxillaires."

le 11 mars 1948: Dr Conrad Godin,

Trois-Rivières: "La conservation de notre capital-santé."

le 12 avril 1948: Visite des docteurs J. K. Carver et Don W. Gullett, président et secrétaire de l'Association Dentaire Canadienne. Il fut question d'assurance-santé, d'éducation dentaire, de relations internationales et d'hygiène dentaire.

Société Dentaire de Montréal

L'élection du bureau de direction de la Société Dentaire de Montréal, pour l'année 1948-1949, a donné les résultats suivants: Président: Louis Lépine; Président-élu: Victorien Dubé; Vice-président: Guy Langelier; Secrétaire: Fernand Laplante; Secrétaire-adjoint: Roger Charette; Archiviste: P.-Emile Poitras; Conseillers (ouest): Charles-Auguste Durand et Jacques Demers; Conseillers (est): M. Gervais et Léon Carpentier; Aiseur: R. E. Lussier. Le poste de trésorier est resté vacant et sera rempli par le Bureau de direction.

Société Dentaire des Trois-Rivières

Le Dr F.-X. Lacoursière, des Trois-Rivières, a été élu président actif de la Société dentaire des Trois-Rivières.

Les autres officiers élus à l'exécutif sont les Drs Louis Lacoursière, de Shawinigan, président élu pour l'an prochain; Réal Lamothe, du Cap-de-la-Madeleine, vice-président; Fernand Beaudoin, des Trois-Rivières, trésorier; Yves Dufresne, des Trois-Rivières, secrétaire; A. Thérien, de Shawinigan, conseiller; directeurs: les Drs Maurice Lafontaine, de Drummondville; J.-O. Cyr, de Thetford-les Mines; Edgar Larouche, de Victoriaville; Hermann de Chatillon, de Nicolet; Emile Vennes, de Grand-Mère et Maurice Morin, de Plessisville.

Le président de l'A.D.C., aux Trois-Rivières

Le 13 avril, sous les auspices de la Société Dentaire des Trois-Rivières et du Dis-

trict, le Dr J. K. Carver, président de l'Association et le Dr Don W. Gullett, secrétaire général, ont payé une visite officielle à cette région.

M. le Dr J.-K. Carver, a déclaré, devant les membres de la Société Dentaire de Trois-Rivières et du district, que la réception qui lui a été faite, à lui-même et au Dr Don W. Gullett, dans la province de Québec avait dépassé toutes ses espérances. "Pour cette raison," dit-il, "vous me pardonnerez l'orgueil que je ressens d'avoir eu, au cours des huit dernières années, le privilège de représenter notre province comme délégué officiel auprès de cette association."

Les Drs Carver et Gullett ont été reçus à un dîner officiel servi à la salle Jacques-Cartier du Château de Blois sous la présidence du Dr Conrad Godin, président de la Société Dentaire des Trois-Rivières. Plusieurs dentistes de la ville et du district assistaient au banquet.

Le président-général de l'Association dentaire du Canada remercia dans un français impeccable, pour la réception que lui réservait ainsi qu'à son ami, le Dr Gullett, les dentistes de Trois-Rivières et du district. "Permettez-moi de vous offrir mes remerciements sincères pour le si chaleureux accueil et la cordiale bienvenue que vous réserviez à notre remarquable secrétaire-trésorier et à moi-même," dit-il.

"Vous savez que nous terminons aujourd'hui la deuxième phase d'un long voyage à travers le Canada. Nous avons visité chaque province et partout nous avons été reçus de façon remarquable. J'étais anxieux d'arriver dans ma province natale parce que j'avais hâte de voir comment nous serions reçus. La réception qu'on nous a faite dépasse toutes mes espérances et je désire vous en exprimer un cordial merci. Aussi vous me pardonnerez l'orgueil que je ressens, non seulement parce que je suis président-général de l'Association Dentaire du Canada, mais aussi parce que au cours des huit dernières années j'ai eu le privilège de représenter notre province comme délégué officiel de cette Association.

"Mon terme se terminera au congrès national qui aura lieu à la Malbaie en

juin prochain. Je n'hésite pas à dire que ce congrès sera le mieux réussi encore organisé par l'Association. Nous devons en faire un grand succès et pour y parvenir, il importe que les dentistes de cette province s'y inscrivent nombreux. Il ne faut pas oublier qu'il viendra des délégués de l'est à l'ouest du Canada. C'est vous de la province de Québec qui serez leurs hôtes. Il faut donc que vous soyez nombreux pour démontrer l'esprit d'hospitalité chaleureux qui règne chez nous. J'ai la conviction que tous mes collègues de langue française se rendront à mon invitation et se rendront nombreux au congrès de la Malbaie pour faire en sorte qu'il soit vraiment le mieux réussi."

Le Dr Carver donna ensuite un rapport complet des activités du comité exécutif et des autres comités de l'Association au cours des récentes années. Il déclara que le développement de l'Association avait été apparent, mais qu'il y avait encore beaucoup à faire pour lui permettre de continuer dans la voie du succès. Plus loin, il devait signaler que, ne négligeant rien pour assurer le bien-être de ses membres. L'Association Dentaire du Canada avait l'intention d'envoyer son secrétaire, le Dr Gullett, étudier l'assurance groupe en Angleterre, au cours du mois de juillet.

En terminant, le distingué visiteur admit qu'il était édifiant de voir un aussi grand nombre de dentistes assister à cette réunion et affirma qu'il allait se souvenir longtemps de la réception qu'on lui a faite ici.

Le Dr Gullett, pour sa part, déclara que c'était pour lui un grand privilège et un aussi grand plaisir que d'assister à une aussi splendide réunion. Il exprima ses remerciements sincères à tous les dentistes pour leur précieux concours à contribuer efficacement au succès de l'Association Dentaire du Canada. "L'esprit de cordialité et de bonne entente qui règne dans cette salle, dit-il, dénote bien les sentiments qui animent chacun de nos membres."

Après avoir signalé certaines difficultés rencontrées dans le domaine de la publicité, au cours des dernières années, le Dr Gullett formula l'espoir de voir la

situation s'établir de façon satisfaisante dans un avenir prochain.

En poursuivant, il déclara que la question de la santé publique ne devait pas devenir une question régie par les autorités gouvernementales. Tout en admettant que les médecins et les dentistes devaient coopérer avec les ministères de la santé il se refusa à croire qu'il soit propice d'adopter une loi fournissant les soins médicaux gratuits à tout citoyen. Il insista enfin sur l'importance de l'éducation en matière dentaire et termina en déclarant: "Nous devons diriger notre travail vers un objectif immédiat et futur. Car il ne faut pas oublier que nous tra-

vaillons aussi pour la génération de demain. La politique que nous avons adoptée et suivie est, croyons nous, celle qui nous conduira le plus sûrement au but déterminé".

Au début du diner le Dr Conrad Godin s'était fait l'interprète des dentistes de la ville et du district pour offrir aux deux visiteurs la plus cordiale bienvenue. Il les remercia pour le travail qu'ils avaient fait, par le passé, pour assurer l'avancement de l'Association et pour la Société Dentaire de Trois-Rivières et exprima l'espoir qu'ils conservent de la cité de Lavolette un impérissable souvenir.



Bureau de direction de la Société Dentaire de Montréal

Photographie du Bureau de direction de la Société Dentaire de Montréal, pour l'année 1949. Première rangée, de g.à d.: Fernand Laplante, secrétaire; Victorien Dubé, président-élu; Louis Lépine, président; Guy Langelier, vice-président; R. E. Lussier, aviseur. Deuxième rangée, de g.à d.: Jacques Demers, conseiller; P.-Emile Poitras, archiviste; Roger Charette, secrétaire-adjoint; Maurice Gervais et C.-Auguste Durand, conseillers. Le docteur Léon Carpentier, autre conseiller, n'apparaît pas sur la photo.



PAGES EDITORIALES

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GERARD DE MONTIGNY, B.A., D.D.S., M.Sc.D., L.C.D.

397 est Boul. S.-Joseph, Montréal

Rapport du Rédacteur de la Section Française du Journal au Bureau des Gouverneurs de l'A.D.C.*

M. LE PRESIDENT, MESSIEURS,

Une fois de plus, le rédacteur de la section française du Journal de l'Association Dentaire Canadienne a l'honneur et le plaisir de paraître devant vous pour présenter son rapport sur les activités de sa section durant l'année, qui vient de s'écouler. Encore cette année, nous avons manqué d'espace, dans le Journal, pour publier tous les articles et les nouvelles, que nous avons en mains et qui auraient intéressé toute la profession.

Nous nous rendons compte des difficultés de toutes sortes, qui assaillent le Comité des Publications. La situation financière se clarifie-t-elle?—Le papier à impression se fait rare. Le papier est-il plus abondant?—Les unions ouvrières déclenchent une grève. Les différents de main-d'œuvre sont-ils réglés?—Le Comité des Publications se trouve au point de départ, en face de difficultés pécuniaires onéreuses. Tous ces imbroglios nous font penser à un cercle vicieux, d'où nous espérons sortir, un jour.

Nous avons donc manqué de pages; cependant, nous avons tenté de rendre notre section aussi intéressante et aussi substantielle, que nous le permettaient les circonstances.

1—Permettez-nous de demander, encore une fois, un plus grand nombre de pages pour la section française, pour nous permettre de liquider l'accumulation de littérature reçue de nos confrères.

* Présenté à la Réunion du Bureau des Gouverneurs de l'A.D.C., à Murray Bay, le 17 juin 1948.

Il m'est agréable de faire part au Bureau de commentaires des plus favorables au sujet de notre Journal, qui ont été faits à notre endroit par des revues françaises, belges et suisses, au cours de l'année.

Il serait trop long de citer tous ces témoignages, mais j'aimerais mentionner un Editorial du docteur Garvin, "Specialists and Specialization," paru dans notre Journal et qui a été reproduit "in extenso," dans un journal suisse des plus distingués, suivi de remarques élogieuses.

Votre rédacteur a reçu plusieurs lettres personnelles louangeant notre revue; ces témoignages ont tous le même sens: ils montrent que les dentistes de langue française d'Europe attendent beaucoup de leurs confrères canadiens-français. Ces sentiments se comprennent facilement en raison de la situation mondiale, à l'heure actuelle.

Nous soulignons cette idée à dessein pour montrer l'importance d'une revue dans les relations internationales. Un Journal officiel est le miroir des activités d'un groupe ou, en d'autres termes, une profession est jugée par son Journal.

Sur ce, nous aimerions que le Bureau établisse sa politique quant à l'échange de notre Journal avec d'autres journaux similaires publiés dans d'autres pays.

Nous recevons souvent des demandes à cet effet, spécialement de France, pour l'échange de notre Journal. Les dentistes français semblent avoir un don tout particulier pour fonder et entretenir des périodiques, car nous recevons souvent de nouvelles revues dentaires françaises, qui désirent échanger leur publication avec la nôtre.

2 — Devrions-nous consentir l'échange seulement avec des journaux officiels ou, pour nous faire connaître d'avantage, devrions-nous accepter l'échange avec tous les revues dentaires, qui sont les organes des sociétés dentaires officielles ou des groupes de dentistes?

Pour notre part, nous sommes en faveur d'échanger notre Journal avec toutes les autres journaux du même genre, à condition qu'ils ne soient pas des imprimés commerciaux et qu'ils représentent réellement une société ou un groupement de professionnels. Parlant de relations internationales—question, qui pourrait être réglée facilement par notre Comité des Relations Internationales—nous aimerions dire quelques mots des rapports, qui existent entre la section anglaise du Journal et la section française. Il nous paraît étrange que les deux groupes raciaux de la profession dentaire canadienne aient si peu de contact dans leur Journal. La partie anglaise a ses propres articles et ses propres nouvelles et la section française agit de la même façon, sans se soucier de sa voisine. Nous croyons qu'il devrait y avoir plus d'unité et plus de compénétration des deux parties. Un éditorial écrit, de temps à autre, par le distingué rédacteur de la section anglaise, le docteur Garvin, serait le bienvenu, chez nous. Des articles, écrits par des confrères de langue anglaise et publiés dans la section française nous feraient connaître d'avantage nos confrères anglo-saxons. Ce programme comporte évidemment une

objection assez sérieuse: celle de la traduction. Cependant, nous croyons que cette difficulté pourrait être résolue par des étudiants bilingues de l'Université de Montréal, qui consentiraient volontiers à faire la traduction de ces articles, traduction, qui serait évidemment contrôlée par une personne qualifiée.

Nous sommes persuadés que des confrères canadiens-français se feraient un plaisir de publier leurs articles dans la section anglaise pour rendre la politesse à leurs confrères anglais.

3—Ces échanges d'idées entre les membres de la grande profession dentaire canadienne donneraient plus d'homogénéité à notre Journal et contribueraient à cimenter l'union des deux groupes du Canada.

Pour terminer, nous tenons à souligner l'appui inestimable que nous ont donné les membres du Comité des Publications, le rédacteur du Journal, le docteur Garvin et tous les autres rédacteurs provinciaux, dans l'accomplissement de notre tâche. Nous les en remercions sincèrement.

GERARD DE MONTIGNY.

Un régime approprié guérit les dents cariées

Un garçon de 17 ans, à Gothembourg, est l'heureux possesseur d'une parfaite denture, sans le moindre signe de carie, et qui ne semble pas devoir nécessiter jamais d'obturations, si ce n'est dans un avenir très lointain.

Son père, le Dr Sten Forshufvud, de Gothembourg, déclare: "Mon garçon n'a jamais eu de brosse à dents. Puisque ses dents et ses gencives sont en parfait état; il n'a aucun besoin de cette sorte de jouet distingué. Il en est autrement des dents malades et des dents obturées. On ne peut les garder propres sans le secours d'une brosse à dents.

Après de longues années de recherches, le Dr Forshufvud a révélé récemment à la presse suédoise quelques faits relatifs à un nouveau et sensationnel mode de traitement des dents cariées.

Le principe sur lequel sa méthode est basée est de donner aux dents assez d'aide pour qu'elles se guérissent elles-mêmes. Le Dr Forshufvud souligne que le tissu dentaire se forme et se conserve, qu'il devient malade et qu'il guérit selon les mêmes principes qui régissent les autres tissus du corps, bien que sa capacité de se guérir de lui-même est un peu moindre. Ses recherches lui ont fait constater de bonne heure que non seulement la dentine, l'ivoire des dents est un tissu vivant, mais que l'émail l'est aussi, que l'on considérait auparavant comme sans vie. L'émail contient aussi du plasma et par conséquent des matériaux de réparations qui lui sont amenés par ce que le docteur appelle des ultra-capillaires. Forshufvud insère de petits fragments spécialement préparés de dent de bétail dans les cavités causées par la carie et, au bout de quelques semaines, ces fragments se sont soudés aux tissus environnants. Des différences apparentes au début dans l'émail disparaissent graduellement.

Beaucoup de ses patients ont déjà été capables de montrer des caries complètement guéries et ils sont enclins à regarder la nouvelle méthode comme de la magie pure. Le régime alimentaire et l'état de santé du patient jouent un rôle très important dans le succès de la cure.

Son promoteur souligne que la méthode n'est encore que dans le stage expérimental et sur un plan purement théorique. Il n'est pas impossible cependant qu'elle n'ouvre de nouvelles voies au traitement dentaire.

CHRONIQUE JUDICIAIRE

Un cas d'ostéomyélite et le dentiste exonéré par le juge

Une action en dommages, au total de \$992.74 instituée contre le docteur Y... dentiste de Montréal, par M. J. F. a été rejetée avec dépens par l'hon. juge Joseph Archambault de la Cour supérieure.

Le tribunal dans ses conclusions explicite:

"La responsabilité édictée par l'article 1053, du Code civil, s'applique aux hommes de profession, médecins, dentistes, avocats, lorsque des fautes dommageables ont été commises par eux et lorsque la constatation de ces fautes à sa base dans les règles du bon sens et de la prudence auxquelles est assujéti l'exercice de la profession. Pour engager la responsabilité des professionnels il faut la preuve d'une faute grossière ou d'un manque aux prescriptions de l'art professionnel.

Le juge Archambault cite l'arrêt dans Nelligan et Clément, B.R. 67, rendu par l'hon. juge en chef Sévérin Létourneau, puis ajoute:

"Il ressort de la doctrine et de la jurisprudence que les tribunaux n'ont pas la compétence pour trancher des différends scientifiques et partager les opinions divergentes des médecins sur certains sujets. Ils ne peuvent conclure à la faute que lorsqu'il y a eu violation des règles médicales admises par tous. Les Cours n'ont rien à voir aux questions d'appréciation controversées du diagnostic ou de préférence à donner à tel ou tel traitement. Les hommes de l'art ne peuvent

être recherchés à l'occasion d'un acte de leur profession qu'autant qu'il constitue une faute grossière tombant sous le sens indépendamment de toute controverse d'école. (Dalloz, Code civil annoté tome 3, no 1573 et La responsabilité médicale, par Me André Nadeau, 153 tome 6, Revue du Barreau).

"Il n'a pas été prouvé que le défendeur dans son diagnostic ou dans son traitement ait commis une erreur ou une négligence ou une faute grave ou qu'il n'a pas agi dans les circonstances avec prudence et suivant les règles de l'art. Au contraire, les docteurs Picard et Gerrie, experts en pratique dentaire, ont admis que le défendeur avait suivi les prescriptions de la science dentaire; ils n'ont pas relevé d'erreur ni aucune faute dans le traitement appliqué par le défendeur au fils mineur du demandeur. D'ailleurs ce traitement était très difficile. L'infection qui s'est produite, appelée ostéomyélite, se rencontre très rarement. Le docteur Gerrie, témoin produit par le demandeur lui-même, déclare que ce genre d'infection ne se produit qu'une fois sur vingt mille extractions, que c'est une complication qu'on ne peut prévoir et qui ne se développe que chez les personnes qui ont peu de résistance physique et dans un milieu où les conditions hygiéniques sont mauvaises, comme il a été prouvé au sujet du fils mineur du demandeur. (C. S. 241,276).

Stomatite due à la pénicilline

Un groupe de dentistes de "l'University of California College of Dentistry" a constaté le développement d'une stomatite chez 18% des patients traités avec des tablettes de pénicilline. Edward Phillips fait remarquer que les tablettes responsables de ces réactions allergiques dans cette série contenaient de la pénicilline calcique, qui semble être plus irritante que la pénicilline sodique.

La grande fréquence des stomatites et des glossites à la suite de l'emploi de la pénicilline calcique limite très nettement son emploi dans les infections stomatologiques et pharyngiennes.

Médecine et Hygiène, Genève, 1er mai 1948.



Photo courtesy Manitoba Travel and Publicity Bureau

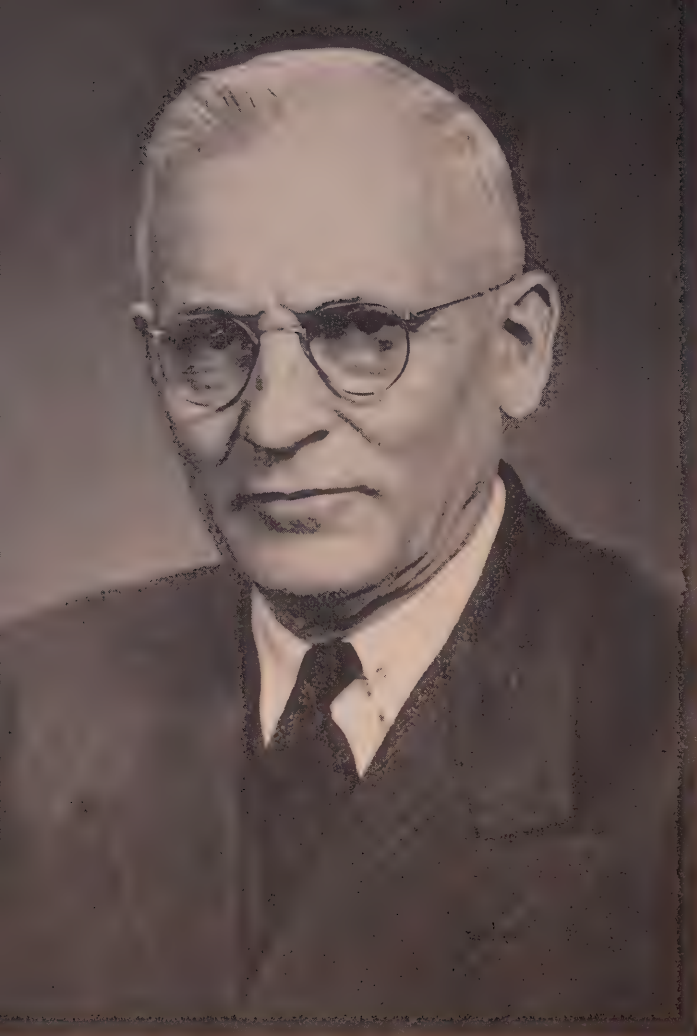
LEVEL LAND AND TOWERING SKIES NEAR THE PAS, MANITOBA



*Rest is not quitting
The busy career,
Rest is the fitting
Of self to one's sphere.*

—John Sullivan Dwight.





H. J. MERKELEY, D.D.S., M.D.
Winnipeg, Manitoba

President of the Canadian Dental Association
Past President Winnipeg Dental Society
Past President Manitoba Dental Association
Past President Western Canada Dental Society



The Journal

OF THE CANADIAN DENTAL ASSOCIATION

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NO. 8

ADDRESS OF THE PRESIDENT

*of the Canadian Dental Association**

by J. K. CARVER, D.D.S., Montreal, Quebec

ONE week ago to day your Board of Governors convened here at the Manoir Richelieu and, with the exception of Sunday, they were in almost continuous session until Tuesday noon. During that time a multiplicity of subjects were dealt with, many of which will influence greatly the course of Dentistry in this country for some time to come. As part of this address I propose to outline for you some of the highlights of those deliberations.

Before doing so, however, I should like to express on your behalf the very sincere thanks of the Association to the Members of the Board of Governors for their faithful discharge of their duties and their keen evaluation of the problems with which they were confronted: to the Chairmen of Committees for a year of fruitful service climaxed by excellent reports: and, to the many members who took an active part in the sessions of the Board of Governors and contributed so greatly to their success through their wise counsel and advice.

No less than twenty-seven reports were submitted to your Board of Governors at this annual meeting.

Each one of these reports was given careful consideration by special committees designated for the purpose after which your Board of Governors were able to arrive at definite conclusions in relation to them. In a meeting such as this, I am sure it will be under-

stood that it is impossible to deal with all of these matters. Consequently, I shall refer only to those I consider to be of immediate concern.

1. *Dental Public Health and Health Insurance* are subjects which have been of very deep concern to your Association for many years past but it is doubtful if any large percentage of our membership really appreciates their full significance. The announcement of the Prime Minister of Canada on May 14 last, revealed that a Health Program is to be introduced in three stages and that Dental Services will be instituted in the third stage.

From the National aspect, this Association stands ready and desirous of cooperating with the provincial boards in any manner that may be of assistance in the planning and introduction of such a health measure. However, since health is a matter of provincial concern, it was emphasized by your Board of Governors that the provinces should be made aware of the urgent necessity of activating existing committees or creating new ones to ensure their proper participation in this government program.

2. As a means of standardizing Dental Education in Canada, your Board has given its stamp of approval to several recommendations of the Council on Dental Education as follows:

(a) Minimum requirements for the approval of dental schools;

*Presented at the National Convention of Canadian Dentists, Murray Bay, Quebec, June 24, 1948

- (b) Principles for the establishment of a National Examining Board;
- (c) Minimum standards for the training of dental hygienists.

The magnitude of the task of the Council in harmonizing thought on these matters can hardly be over-emphasized. Their effect on dental teaching and practice will be far-reaching and of lasting benefit.

3. The Canadian Dental Association policy respecting Industrial Dentistry remains unchanged and your Board has reiterated its determination to publish suitable printed matter in collaboration with the Department of National Health and Welfare. By this means, it is hoped that industries may be properly advised on all matters related to the introduction of Dental Health Services.

4. Approval has been given to basic standards for dental services in approved hospitals. This matter has been given prolonged study by the Association and it is considered that the publication and distribution of these fully endorsed standards will fill a long felt need in improving dental services in hospitals.

5. Announcement of the winners of the War Memorial Award for this year revealed the successful contestants to be:

1st—Michall Medora, McGill University.

2nd—Vincent Tremblay, Université de Montréal.

During the course of the past year it has been the privilege of your President to visit most of the dental societies of this country from Coast to Coast in the company of our genial secretary. Altogether it is perhaps safe to say that we covered some 12,000 miles in the interests of the Association and as ambassadors of good-will. In every locality we were greeted with the utmost hospitality and enthusiasm. Without exception our meetings were very well attended and the interest displayed in the welfare of the Association was a source of much encouragement to us. In addition, it was a great stimulation and even education to your

President to meet so many members of the profession with so keen an appreciation of the problems of the Association and a desire to be fully informed with respect to them. One cannot help but feel that this is an omen that will stand the Association and the profession itself in very good stead as the years go on.

Your Officers and Board of Governors have expressed their very real gratification to all Corporate Members (Provincial Boards) for the increased financial support that was given to the Association during the last year. At the present time seven Provinces are contributing eight dollars and the other two, Alberta and Ontario, ten dollars per member. A perusal of this year's budget will reveal the immediate benefits accruing to the Association as a direct result of these increased per capita grants. One cannot refrain from pointing out, however, that as yet the Association has not found it possible to finance its own National Headquarters nor assume the full responsibility for the remuneration of its highly efficient secretary. Before these objectives can be reached it is obvious that one more slight upward revision will be required whereby all provincial bodies will contribute on an equal scale. I am confident that this will be achieved in the not too distant future through the same good-will and understanding as was displayed by all during the past twelve months.

As I lay down my mantle of office I should like to say how very grateful I am for having had the privilege and honour of serving my profession in this exalted office. For this and for all of the kindnesses and courtesies extended to me throughout the year I wish to express my grateful appreciation.

"My heart is warm with the friends I make and better friends I'll not be knowing."

As I reflect with you upon the success of this Convention I cannot nor would I, refrain from expressing the Association's thanks and my personal gratification to the General Chairman of the program committee, Dr. Gustave

Ratté, for his tireless efforts on our behalf. The tremendous responsibility of organizing and conducting a convention of this kind is something that can only be appreciated by those within the organization's framework. From the very outset Dr. Ratté proved his capabilities as a leader by surrounding himself with a group of enthusiastic and efficient friends and confrères, by no means the least of whom was our genial Past President Dr. Philippe Hamel who developed the splendid scientific aspect of the program and Mrs. Jules Hamel who organized the Ladies' Program. To each of these individuals and to all of the committees we offer sincere congratulations and heartfelt thanks for a highly successful convention.

I cannot let this occasion pass without expressing the thanks of the Association and my own appreciation to the College of Dental Surgeons of the Province of Quebec and La Société de Stomatologie de Québec, our hosts, for their kindly co-operation in making this year's meeting such an outstanding success. In addition I wish to acknowledge the valued assistance given by our confrères of Rivière du Loup, and, The Mount Royal Dental

Society—La Société Dentaire de Montréal and my own Montreal Dental Club—in providing hospitality centres for the convenience and accommodation of delegates to this Convention passing through those areas.

Nor would I care to conclude without paying a just tribute to our Secretary and his capable staff. For a number of years as a member of the Board of Governors I have been in a position to witness the smooth efficiency with which our Headquarters Staff operate. However, during the past year I have had the opportunity to evaluate their worth and to know and appreciate them as never before. Of Dr. Gullett I can only say that the Association is most fortunate in having such a loyal, capable and devoted servant.

And so to all of those whom I have specifically mentioned and to my Executive Officers—Board of Governors and Committeemen I offer thanks for the privilege and honour of having served with them. I congratulate my successor most heartily and bespeak for him the same measure of enthusiasm and loyalty from the entire membership and wish him every success and happiness throughout his term of office.

ANNOUNCEMENTS

Northern Ontario Dental Association

The annual meeting of this society will be held at the Haileybury Hotel, Haileybury, Ontario, on Saturday, September 11. Dr. W. B. Amy of Toronto is the guest clinician for the day in "Immediate Denture Service", including both the surgical and prosthetic phase. Dr. Amy has a number of coloured slides to illustrate his technique.

President Dr. W. R. Somerville expects a good attendance of the Northern Ontario dentists and hopes for a good number of visitors representing the profession from other parts of Ontario.

Make your reservations for hotel accommodation directly to the hotel.

Eastern Ontario Dental Association

Ottawa on September 19, 20, 21. Convention at Chateau Laurier Hotel

GEORGE W. BARRETT, D.D.S. *President*
793½ Bank St., Ottawa

I. F. CALDER, D.D.S., *Secretary*
Brockville, Ontario

DENTAL ROENTGENOGRAPHIC INTERPRETATION AND DIAGNOSIS*

A Systematic Examination of Dental Tissues

by JOHN W. CLAY, D.D.S., Calgary, Alberta

I HAVE been asked to give a talk on the interpretation of radiograms, or as it is more correctly stated, Roentgenograms. It is unfortunate that Roentgen rays and their possibilities were not discovered by a man named Smith or Brown as it would be much simpler to say Smithogram or Brownogram. However such is not the case and radio has so many applications these days that it is loose terminology to speak of radiograms. There seems to be no simpler accurate word to use. I shall however, in this paper be guilty occasionally of such loose terminology, as a protest.

A discussion of this subject is almost impossible and in large part valueless without branching out into the field of diagnosis, which is the purpose of making and reading Roentgenograms. I shall therefore cover briefly my allotted subject, wandering into the twin field of diagnosis as the occasion demands. Very frequently Roentgenographic interpretation and clinical diagnosis are two parts of a whole, "useless, each without the other".

I should like to stress the value of writing a short case history. Frequently a word or two of explanation as to the reason the examination is

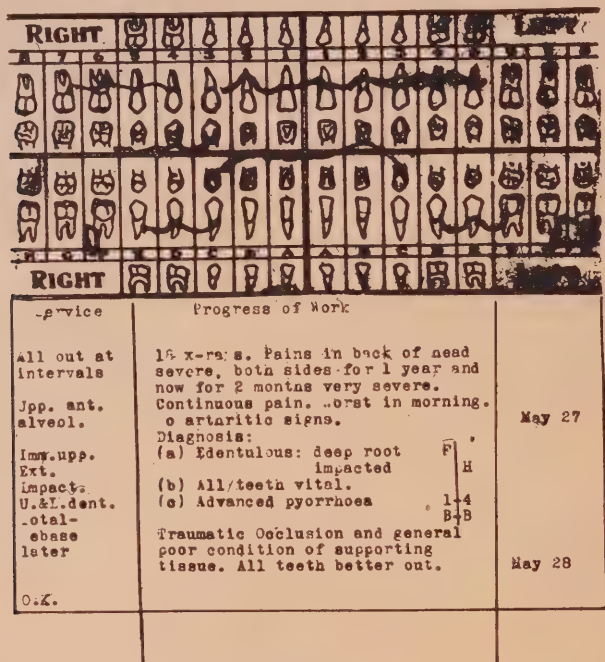


FIGURE 1.

* Presented at the Convention of the Western Canada Dental Society, at Banff, June 1947.

being made is all that is required, but often it is well to sit down a moment and write on the patient's card the pertinent facts. In examination where there is extensive caries or supporting tissue disease, a record of complaints, physical condition, age, diet, occlusion and other related facts is of great value when the films are examined and diagnosis made. Again when there is a complaint of pain or soreness, the location of the pain, its frequency and type, whether there has been recent infection of the maxillary sinus and other details, all help in evaluating what is later seen in the Roentgenograms. After a cursory examination of the mouth and before the films are exposed, is the time to record this data. Needless to say when a complete mouth examination is made for dental sources of general ill health, a record of that fact and some history is a preliminary requirement. (*Fig. 1*)

At a second appointment, with case history, adequate films in mounts on a suitable view box and a magnifying glass, the dentist is in a position to properly interpret the films and make

a diagnosis. (*Fig. 2*) No interpretation of Roentgenograms is adequate without coincident clinical examination which may require tests for vitality of pulps and a thorough examination of the supporting tissues of the teeth. All of these factors are necessary and a diagnosis with any one of them missing may well be faulty.

As the examination is made the findings should be written on the patient's chart so that a complete record is available while the work proceeds, and for the future. If a report is to be sent to a physician or other person, the data is all there and there is no guessing or mistake or forgetting what conclusion is arrived at. At this time the patient should be given a simple explanation of the findings with the consequences in loss of function and needs of replacements or otherwise, and the approximate cost in all major cases. All this should be recorded at the time.

For example we have an illustration of diagnostic record (*Fig. 3*) and one of a report to a physician (*Fig. 4*). A written report to the physician or refer-



FIGURE 2.

RIGHT														LEFT															
[X-ray images of upper teeth]														[X-ray images of upper teeth]															
[X-ray images of lower teeth]														[X-ray images of lower teeth]															
RIGHT														LEFT															
Service		Progress of work																											
		Last Oct. some pain and swelling, left mandible. Now in Holy Cross 10 days for large swelling below angle, lower jaw. Sulpha, Penicillin. Temperature 103°. Intense pain for three days and temperature before swelling. Caseck hospital Roentgenograms. Teeth out about 17 years ago. Ache and no swelling for 6 or 7 years, lower left 2nd molar area. No pain now and temperature normal. Call at Holy Cross Call at Holy Cross. See report to Dr.---- 4 Roentgenograms at office. Deep root with rarefaction around it involving inferior dental canal area. 2 roots remaining at L8 and R6																										May 22	
																												May 22	
																												May 23	

FIGURE 3.

Dr. -----
200 Maclean Bldg.
Calgary, Alta.

Dear Dr. ----

Re: Mrs. -----, 46 Joraine Ave., Calgary.

Radiograph and clinical examination of the mouth of this patient show the following:

(a) Edentulous area-

1. Lower right first molar; deeply buried root
2. Lower left third molar; completely impacted

(b) All teeth vital

(c) Advanced pyorrhoeal condition around most of the remaining upper and lower teeth.

(a) and (c) are harmful from a general health standpoint and the teeth are to be removed.

Thanking you, I am,

Yours sincerely,

FIGURE 4.

ring person is always necessary as he needs it for his files for future reference and cannot be expected to remember what he was told over the phone, even for a day or two.

Examination should be systematized for both edentulous and dentulous mouths. In both types there are usually too few films taken. In cases

where teeth remain the edentulous areas, which are equally important, are frequently neglected. Always the third molar areas should be covered, so that the posterior wall of the tuberosity is well defined in the upper, and the junction of the body of the bone and the ascending ramus in the lower jaw.

After a survey of the films and the mouth has been made, including a study of the general bone conditions, each area should be examined carefully to decide if there are any abnormal conditions. Many abnormalities are not pathologic and some pathological areas are not foci of infection.

EXAMINATION OF EDENTULOUS MOUTHS

Before discussing mouths where teeth are present I should like to say a word about the examination of edentulous mouths. A clear mental picture of the variations in appearance of normal healthy tissue is important

and a little study to develop the mental picture is worthwhile.

In over sixty percent of edentulous mouths there is some pathosis. Patients in this class should be examined a full two years after final extraction before a clear bill of health can be given. This procedure is doubly important for those with physical defects which may be due to focal infection. Do not forget that an area of infection or roots present six months after extraction will likely be still there twenty-five years later. Abnormalities of importance as seen clinically or in the films should be recorded. A few slides will illustrate the importance of examination in this class of cases.

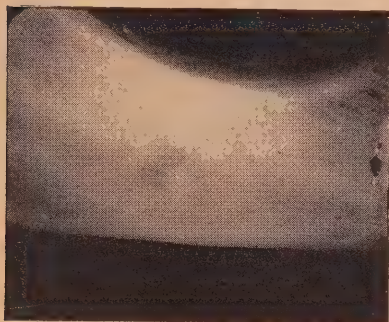


FIGURE 5.

EXAMINATION OF DENTULOUS MOUTHS

A more complex examination is required when all the teeth are present and where the mouth is only partly edentulous. I find it a good plan to make an examination with three main divisions:

- (1) Edentulous areas.
- (2) Teeth and apical tissues and underlying bone. (deep conditions)
- (3) Condition of supporting tissues surrounding bone. (changes initiating from the surface)

(1) *Edentulous areas*:—

These areas are frequently neglected when taking Roentgenograms. Many times what purports to be a complete set of films is not complete and remain-

ing roots, impacted teeth or other pathologic conditions are disclosed at some later time to the embarrassment of the man who made the original examination. It is worthwhile to spend a few more cents on films and a little more time to be sure this cannot happen. I have now three films illustrating conditions which may well be harmful to general health and which would be overlooked if the edentulous areas were not included in the examination.



FIGURE 6.

(2) *Apical tissues and underlying bone*:—

As a starting point we should always keep in mind the clinical appearance of healthy tissues and be alert to notice any variation from this condition. So also the normal appearance in the Roentgenogram should be firmly fixed in our minds. What should this be for apical areas?

In the case of normal healthy tissues there is a thin, dark line next to the root, surrounded by a thin white line and beyond that the irregular cancellation of bone. The first is the readily penetrated peridental membrane and the next is the dense layer of bone forming the socket—the lamina dura. Both of these lines should be clearly defined and fit closely to the tooth.

The lamina dura is the deciding factor in the examination. If the white line of the lamina dura at the apex of the root has disappeared, ending abruptly as it is followed from the side

of the root, it is almost certain that there is a pathologic condition at the apex. According to Dr. Weston Price this area in patients of low resistance is usually small, merging without distinguishable line into cancellation of the bone, and again in those of high resistance, the area of absorption of bone is usually occupied by granulomatous tissue. This is sometimes small though more often of considerable size. In the latter case it is usually surrounded by a dense layer of bone, which has been built in, in an effort to wall off infection. The former type, that without a limiting wall, is much less apparent but because of free access to circulation, is I believe, probably the more harmful.

One condition which must not be confused with an infective root-end condition is hypertrophy of the peridental membrane at the apex, often due to excessive use of the tooth or traumatic occlusion. In these cases a widened dark line may show but a positive result from a test for vitality of the pulp, and the continuity of the lamina dura, though in a thickened condition enables a negative diagnosis to be made. As a check on the findings a cold test and a vitalitester check should always be done. There may be some who have missed the advantages of a spray tube of ethyl chloride in testing for pulp vitality. A careful approach with a pellet of cotton which has just been sprayed with ethyl chloride will disclose not only vitality but variations

from normal. It is especially useful in testing teeth with gold, porcelain or acrylic crowns, contact being made close to the gingival margin. A finger placed on the adjoining tooth will be great help in avoiding error. A record of teeth showing slight or marked sensitivity in relation to the normal is valuable information for the future. (Fig. 7) This also applies to tests with the vitalitester. I frequently make these tests at the first appointment and have the information to aid when the diagnosis is made. At this time caries and reparative defects as shown on the films and by the clinical examination should be charted.

(3) *Conditions of supporting tissues and surrounding bone:*—

In the preceding section we have discussed deep seated pathosis and infection which has gained access through the apical foramen. As careful an examination of the changes which have their origin at the gingival margin should now be made.

In this we find that the clinical evaluation of conditions is of as great importance as the Roentgenograms. The two are equally necessary. I should like to stress the fact that diagnosis with films alone is quite inadequate as one can only hope to have some of the answers and some of these probably inaccurate.

As an example, how often have we seen deep pockets on the lingual, labial, or buccal of the teeth exuding pus on pressure, which are not visible in the

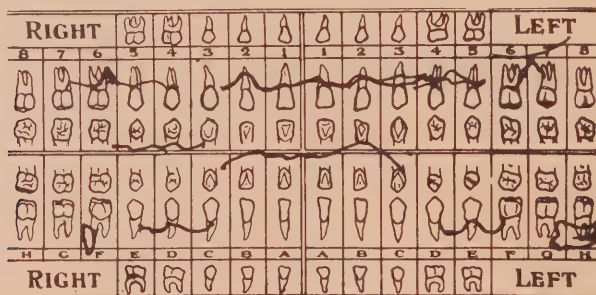


FIGURE 7.

about complete. (Fig. 8)

Let us not forget that active pus conditions around the parietal surfaces of the roots are as harmful to general health as at the apices. In both cases if they cannot be cured they should be eliminated by extraction.

It may be thought that the procedure outlined is too long and time consuming, but as much extra time is used in re-examination from time to time and with the probability of errors. It is surprising how little longer it takes and the value is apparent. After all one charges an adequate fee for a com-

FIGURE 8.

plete examination and it is neither honest nor satisfactory to oneself to do less. Whether the examination is for conditions affecting general health

or for conservative treatment, a good examination with reasonable records forms a blue print from which intelligent work can be done.

(Due to space requirements interpretation of various conditions has been omitted)

901 SOUTHAM BUILDING.

ANNOUNCEMENTS

Dental Faculty, University of Alberta Dedication Ceremony

Formal opening of the New Dental Clinic, Saturday, September 18. Followed by a two day program of clinics and lectures, Monday, September 20 and Tuesday September 21.

Continuation Courses For Graduates in Dentistry, Faculty of Dentistry, Univ. of Toronto, Session 1948-49

The Faculty of Dentistry, University of Toronto announces a series of short intensive courses for dentists during the 1948-49 Session. These courses will be arranged and conducted by the staff of the Faculty of Dentistry with the co-operation and financial support of the W. K. Kellogg Foundation of Battle Creek, Michigan. When deemed advisable, outstanding visitors will be included among the lecturers and clinicians.

These courses are designed to help the general practitioner with an opportunity to keep abreast of standard methods and procedures of practice, and to become informed respecting the most recent developments within the profession. Instruction will be given through lectures, seminars and clinical demonstrations. No instruments or equipment will be required of those who enrol in any of the classes.

Endodontia: Each Wednesday 2.00 p.m.—5.00 p.m.

Oct. 13, 20, 27. Nov. 3, 10, 17, 24. Dec. 1, 8, 1948. Enrolment Limit 8.

Radiography: Friday, Nov. 5, 1948, 5.00 p.m.—9.00 p.m.

Thereafter each Saturday 10.30 a.m.—3.00 p.m.

Nov. 6, 13, 20, 27. Dec. 4, 11, 1948. Enrolment Limit 6.

Periodontia: Each Wednesday 2.00 p.m.—5.00 p.m.

Jan. 5, 12, 19, 26. Feb. 2, 9, 16, 23. March 2, 9, 16, 1949. Enrolment Limit 8.

Periodontia: Monday, May 2—Friday, May 6, 1949 (inclusive).

9.00 a.m.—5.00 p.m. Enrolment Limit 12.

Partial Denture Prosthesis: Each Wednesday 2.00 p.m.—5.00 p.m.

Feb. 16, 23. Mar. 2, 9, 16, 23, 30. April 6, 13, 20, 1949. Enrolment Limit 8.

Orthodontia: Monday, April 18—Friday, April 22, 1949, (inclusive).

9.00 a.m.—5.00 p.m. Enrolment Limit 10.

Minor Dental Surgery: Monday, April 25—Friday, April 29, 1949 (inclusive).

9.00 a.m.—5.00 p.m. Enrolment Limit 8.

Operative Dentistry: Monday, April 25—Friday, April 29, 1949 (inclusive).

9.00 a.m.—5.00 p.m. Enrolment Limit 8.

Pedodontia: Tuesday, May 2—Friday, May 6, 1949 (inclusive).

9.00 a.m.—5.00 p.m. Enrolment Limit 8.

For further information address inquiries to:

THE DEAN, *Faculty of Dentistry,*

230 College St., Toronto 2-B, Ont.

SILICATE RESTORATIONS

by F. T. PEARSON, D.D.S., Toronto, Ontario

"DOCTOR, I don't like the appearance of gold in the front of the mouth. Is it possible to use a material that will match the shade of my tooth?" How often has a patient asked you that question. Operative procedures in the anterior teeth are perhaps the most important dental procedures as far as our patient is concerned. They must not only fulfill his needs for restoring function and health but they must satisfy his desire to maintain a good appearance. Here is a demand for æsthetic dentistry. By the use of silicate are we supplying that demand with good dentistry?

It is estimated that in the U.S.A. more than ten million silicates are inserted annually. It is also estimated that the average life of these fillings is four and one-half years. Yet there are many to be found that are life-like and sound after twenty-five years' use. Lasting and beautiful silicate restorations are no myth. This is the service your patient is seeking, one for which he will be very grateful.

The secret of longevity and æsthetic effect lies in our hands. We know that materials which have passed specification tests can stand up. Therefore good judgment in its use, a thorough knowledge and understanding of its properties and actions together with a technique which will allow its maximum performance can and will provide fine dentistry—not just a temporary stopping.

COMPOSITION AND PROPERTIES

Analytically there is little difference in the accepted silicates on the market. Basically the powder consists of silica calcium compounds and alumina much the same as Portland cement. Cryolite and phosphates are added to give properties suitable for dentistry. These are fused together at high heat and the resultant solid crushed into a powder the particles of which are

blended for size. The liquid is composed of phosphoric acid, water and aluminium and zinc salts. The most important of these is water as it is the reaction with water (hydration) that gives the desirable qualities of silicate. The acid and buffers are catalysts which speed up the reaction and make it practical. The correct relationship of acid to water and buffer controls the setting time, resistance to chemical attack, strength, and working properties. It is readily seen therefore why the care of the liquid is so vitally important.

When the powder comes in contact with the liquid the surfaces of the powder particles are dissolved forming a silicic acid gel which unites together in a network to hold the greater part of the powder unacted upon. This is of a capillary nature providing storage space for water. In its plastic state we have all surfaces of the powder particles wet by the liquid. The solid mass should contain 70 per cent undissolved powder particles surrounded by a set gel.

There are two points to remember in this action:—(1) It takes the form of an irreversible colloid. If the completion products of this colloid are broken down or changed in their physical state the physical properties of the silicate will be changed. (2) The gel formation proceeds at a rapid pace and temperature has a decided effect on its speed.

Silicate is weaker than dentine and chips, because it is brittle. It is about half as strong as amalgam. Increased powder-liquid ratio results in greater compressive strength. The rate of reaction between the powder and liquid can be roughly determined by compressive strength tests. After 15 minutes it attains only 40 per cent of its ultimate strength at 14 months, after three hours—60 per cent and after one week, 80 per cent.

There is a clinical relationship between the compressive strength and the solubility. The solubility is generally greatest during the first week but should not exceed 2 per cent at any time.

Moisture is the enemy of silicate in its early stages. It will cause a soft surface and high solubility. This facilitates stain and expansion.

Prolonged absence of moisture after the silicate has been inserted, causes internal dehydration of the material resulting in shrinkage, decreased compressive strength and discolouration.

Therefore it is our problem to combine both conditions; keep it dry until the surface will not be affected and then allow it to be bathed in moisture to combat shrinkage.

Silicates have been blamed for pulp irritation and it is thought that acidity has caused this. Although the powders are alkaline, the liquids have pH values that run from 1.9 to 2.3. After 15 minutes a setting silicate has a pH of 3.6. After 4 hours it is 5.5 where it remains. *Therefore all cavities must be lined.*

Some of the other properties of silicates are the following:—Thermal change is about the same as the tooth. The index of opacity is about .40. Teeth vary in opacity from .35 to .55.

Refractive index is 1.45. Dentine averages a refractive index of 1.50 and enamel 1.60.

CONSEQUENCES OF PROCEDURE ON SILICATE

It is true that because of the apparent simplicity of technique, silicate has suffered extreme abuse and consequently poor results have been attained; but we have been guilty of exercising poor judgment in the employment of silicate in some conditions. Have we carelessly used it when it was not possible to apply rubber dam? Did we thoughtlessly insert silicate in young patients without the aid of x-ray? Did we thoroughly investigate the breathing and sleeping habits? Was the cavity preparation box-like and free from incisal involvement?

Let's give this fellow a chance. It's easier than trying to excuse a failure a year from now.

Silicate offers a challenge to dentistry. It not only requires technical skill but also artistic good judgment. The chief reason the public insists upon its employment is colour. We then must be shade conscious. All our procedures must be carried out with shade in mind. How many silicates are failures from the start because they do not match the shade of the teeth. The sole thought of shade in many of these cases has been a fleeting wave of a guide in the general direction of the mouth. From prophylaxis to removal of protection, shade has a vital influence on all our procedures.

Observance of the principles of good cavity preparation is imperative but cavity preparation has its own peculiarities regarding silicate. We must respect its lack of strength by omitting bevel and we must plane and smooth the cavo-surface line angle to prevent troughing of margins. In all cavity preparation it is our concern to extend for prevention. In silicate cavity preparation it is also our problem to give serious consideration to harmony of colour. Therefore where should we cut the labial and lingual walls? Since teeth in general vary somewhat in opacity and refraction and since silicate has a standard opacity and refractive index, then even if the shade of the tooth is matched exactly, there may be a contrast registered between filling and tooth. This will be most conspicuous at the outline along the labial wall. It is our aim then to make this junction in a line which harmonizes with the outline of the crown and at an exact location on the tooth where it is least noticeable. The join in a cardboard carton is more difficult to locate if it is situated at a corner. Perhaps then the junction of the proximal and labial surfaces is the location of the labial wall.

An outline cut well in at the gingival and incisal can give added bulk to aid in minimizing silicate's faults of

shrinkage and weakness.

The outline of Class V cavities is also one of straight lines with the only curves at the junction of the walls. These walls should be parallel to the outline of the tooth. A kindey-shaped outline covers greater area and affords less opportunity to combat contrast.

The lining of a cavity which is to receive a silicate filling must cover all cut dentinal tubules. Nature usually provides a natural barrier behind the decay in the form of secondary dentine. It is in the extension of the cavity where the tubules are most vulnerable. Varnishes have been proven to be ineffective. Zinc oxide has proved to be a fine protection but its opacity cannot be overcome by a thin layer of silicate. Oxyphosphates used over zinc oxide or in shallow cavities by themselves seem to fill the need. Shades may be chosen that are close to dentine. Some men fill the tooth entirely with cement and recut the cavity in this. They should be free from the worry of pulpitis.

The choice of shade can be made after cavity preparation and insertion of lining. We now know how deep the silicate will be, and we have no discolouration from decay. Natural light is preferable but if artificial light is necessary, supplement it by means of a small light at the lingual of the teeth.

We must consider the cavity to be filled in its relationship to the tooth, the corresponding area in the adjacent tooth and the general pattern of the mouth. From a shade standpoint we must consider this part of the tooth to be restored and not the tooth as a whole. Since the shade of a tooth is greatly influenced by the amount of dentine it possesses, the area that the cavity traverses greatly influences the shade of silicate employed. A shallow proximal cavity may not require the same shade as the frontal portion of the tooth. Cavities may involve areas that differ in shades in which case more than one mix would be prepared at a time and blended after insertion.

Shade seems to be best chosen by

elimination. Is it yellow, red yellow, or blue yellow grey? Quick glances will prove most accurate.

TECHNIQUE FOR MIXING

The National Bureau of Standards has published a booklet entitled "Physical Properties of Dental Materials" from which the following points on technique for mixing silicates are taken:

"(1) Use an exact ratio of powder to liquid. This ratio should represent the maximum of powder it is possible to use so as to keep the amount of gel in the restoration at a minimum.

(2) Mix the liquid and powder on a chilled slab. (Dew must not form on the slab.) The lower temperature of the slab aids the operator to wet each powder particle with the liquid before any appreciable amount of the chemical reaction has taken place, thus minimizing injury to the gel.

(3) The mixing should be speedy and the restoration completed quickly so that the setting reactions may take place undisturbed in the cavity.

(4) Wherever possible, the restoration should be moulded to correct anatomy. Attempts to cut or polish the finished restoration will expose hard particles of powder embedded in a gel matrix. It is very difficult to polish this non-homogeneous material.

(5) The water content of the liquid must not be permitted to change.

If for any reason the mixing techniques are changed as indicated below, the corresponding change in properties may be expected. Decreasing the amount of powder increases the time of set, the solubility, and the shrinkage and reduces the strength. Increasing the mixing time increases the time of set and the solubility. Increasing the temperature of the mixing slab decreases the time of set and the powder liquid ratio. Decreasing the amount of water in the liquid increases the time of set and the solubility."

The duplication of shade necessitates strict adherence to the rules of mixing. The shade is made from an ideal mix.

Therefore in order to duplicate the shades we have chosen, we must produce an ideal mix. An abundance of gel will produce a diluted colour. A mix that contains dry powder particles will result in a light opaque mass.

INSERTION AND CONTOURING

The insertion of silicate must be done quickly, under pressure and with an absolute minimum of excess. Pressure is desirable for the silicate mix has tiny air bubbles in it which can be contracted to give a denser mass. The pressure must be retained however until the filling has set sufficiently to contain these bubbles. If it is released before three minutes the air bubbles warmed by the tooth will expand and force the silicate from the confines of the cavity.

It is difficult to insert the filling quickly, restore accurate contour and contact and at the same time eliminate excess. I do not believe that this can be achieved by means of celluloid strips. Some men use stainless steel matrices shaped with a burnisher and coated with a varnish. A reasonably accurate conformation may be obtained by first filling the cavity with cement and restoring contour and contact. Impressions can be taken both from the lingual and labial in compound. When the cavity has been filled with silicate these impressions are replaced over a thin celluloid strip. It is possible by this means to obtain a steady pressure and minimize excess.

The post-operative treatment of silicate is simple. We cannot however immediately dismiss the patient as the time factor is important. The rubber dam is kept in place and the filling allowed to set for 15 minutes. Immediate application of cocoa butter or vaseline will prevent loss of water

from the restoration. It is necessary to insure that all of the surface is covered including the contact point. After 15 minutes silicate should now be set sufficiently to dismiss the patient. Before this is done additional protection can be added. A mixture of one-half paraffin and one-half vaseline is used widely. Repelac is another protection that is used frequently but its efficiency is questionable. It tends to dry rapidly and in so doing causes a condensation beneath it. This moisture can often be noticed by a milky appearance on the surface.

Although it is necessary to employ protection from moisture in the early stages it is equally imperative that the patient be instructed to remove this protection thoroughly after three hours. A full explanation as to why this is important usually proves interesting to the patient. It is not waste time measured from any standpoint.

"Doctor, is it possible to insert a filling that will match the shade of my tooth?" It is possible to use silicate and have a result that is lasting, not just a substitute for something else. Silicate has a place in dentistry but its limitations must be recognized. This problem child must be treated with thought and care if it is to take its place as a healthy member of our family. We may say that it is time consuming to produce good silicates but any fine restoration requires time. This is a service our patients seek. Their appreciation of good silicates is as great as for any other fine restoration.

BIBLIOGRAPHY

- C. A. Nelson. Dental Silicates, J.C.D.A., Dec. 1943.
- C. C. Paffenbarger. Rational technic for Silicate cement, N.Y.J.D., Dec. 1943.
- Souder and Paffenbarger. Physical Properties of Dental Materials.

If I had my life to live over again, I would have made a rule to read some poetry and listen to some music at least once a week; for perhaps the parts of my brain now atrophied would thus have been kept active through use.

The loss of these tastes is a loss of happiness, and may possibly be injurious to the intellect, and more probably to the moral character, by enfeebling the emotional part of our nature.—Darwin.

The Forum

AUXILIARY PERSONNEL—HOW FAR SHOULD WE GO?

by DR. JOHN T. O'ROURKE, Former Director of Postgraduate Courses at Tufts College

(Dr. O'Rourke died suddenly June 3, 1948)

Condensed from New Eng. D. Jour., April, 1948

To answer that question, we have to consider first the fact that the need for dental care has increased in this country. One of the reasons why it has increased is to be seen in the aging of the population.

The consequences of that aging of the population, I think, should be quite evident. We can anticipate that the prevalence of periodontal disease is much more marked than it was in 1900; certainly it is more marked than was the case in 1840. There is consequently greater need for periodontal service.

We also, I think, should realize that there is greater need for prosthetic service than there ever has been in the history of this country.

Another factor is to be seen in the advance in life expectancy in this country.

Today, we have imposed on the original problem of controlling dental caries, the increasing demand and need for prosthetic and periodontal service. We might add a third point at which the need for service is certainly increased, and that is in the field of child dental care.

We cannot compare the dental population ratio of the past with those of the present—they are not strictly comparable. Certainly, we can't go back to 1940 and say that because we had so many dentists per 100,000 population, that is the number we should have in 1950 or 1960. It simply doesn't make sense, and it doesn't make sense for another compelling reason—namely, that the dental profession itself is getting older and, as this takes place,

there is a loss in service effectiveness. In 1910, only 23.1 per cent of the dentists were over 45, and in 1940, 45.7 per cent of the dentists were beyond that age. That is one of the reasons why we cannot compare the ratio of one period with that of another.

Advance in the median age of dentists is due to the fact that the period of training has been extended; graduates are beginning practice at a more advanced age. There have been compensations because of improvement in materials, technique, and equipment, but if we take those compensations into account, we might estimate we have lost from 1930-1940 the equivalent of at least 1,500 full service dentists.

The aging of the dental profession is going to continue. Many of the students who came into school as freshmen this year were 25 years of age or over. They are at an age when most young men in the prewar period were finishing the course in dentistry. Therefore, we can look forward to a rise in the median age of dentists within the next several years.

What can we do about it? There are limits to the multiplication of dentists which has been advocated as a solution to this problem. The saturation point is reached when the people cannot afford to purchase dental care with the money that they have at a given time. I think we need more dentists. It's a simple way out of a problem, but I don't think it's a good one.

I think that our greatest need, in addition to research, is for a marked

increase in the utilization of auxiliary personnel in this country. I think that by the use of auxiliary personnel, a dentist can care for a greater volume of patients at a cost to those patients in harmony with the economic status of the community. That of course, does not answer the question, "How far should we go?" I'd like to discuss one more point, and that is that we have done a lot of talking about a shift in our philosophy toward greater emphasis on prevention and control, but we have taken very little action. We

are not taking care of our children, and children represent the most important assets which we have in this country. Therefore, if we are going out for prevention and control, we will have a child-patient load on one hand and an adult-patient load on the other, both competing for a limited number of dentist-hours. Now, who is going to get the service? There are not enough dentists for both. The solution appears to lie in research and in the expansion of auxiliary workers.

AUXILIARY PERSONNEL

by DR. BASIL G. BIBBY, Director of Eastman Dispensary in Rochester

Condensed from New Eng. D. Jour., April, 1948

Many of the problems which are now acute in dentistry have been solved some years previously by medicine.

Medicine has had a long experience in the use of auxiliary personnel. The dramatic beginning of that development goes back to the days of the Crimean War, when Florence Nightingale wanted to provide nursing service for the soldiers, who at that time were dying like flies, virtually unattended, in the army hospitals. She met active resistance from the medical profession and had to finance the cost of her expedition to Crimea out of her own pocket and the pockets of her friends. She was obstructed at every turn; she met opposition from Medicine and official obstruction from the army. Had it not been that she was a woman with excellent connections, who had the sponsorship of many influential families in England at the time, the experiment in providing nursing service to the sick might never have started, or at least have been postponed for many, many years.

In other words, the medical profession of that period had all the fears of encroachment into their field of service which echo in the dental field at the present time. Similar fears have been voiced even more recently in respect to the growth of various other auxiliary services in medicine. The em-

ployment of laboratory technicians, for instance, was vigorously opposed in many quarters; but now, no up-to-date hospital, no up-to-date clinic, or no progressive practitioner can get along without the services of a laboratory technician.

Certainly, the laboratory technicians and the nurses are carrying out certain duties which previously were considered to be the sole responsibility of the physician. The physicians have not suffered—they have benefited. The service given by the auxiliary personnel is in high demand. The unsatisfied demand for nursing services which exists at the present time is not causing a lowering in the demand for the services of physicians. On the other hand it accompanies the highest demand for medical service that has ever existed in this country.

It cannot be claimed that medicine was progressive and farsighted in initiating the use of auxiliary personnel, that they debated the thing and came to a logical conclusion and a statesmanlike decision; but, nevertheless, these experiments in nursing in the employment of laboratory technicians and the like, were started and they grew—they stood or fell on their own merits.

There was very little hesitation, in 1916 and '17, when the idea of develop-

ing dental hygienists was presented. Very soon, several states licensed the dental hygienist, and very soon training schools for dental hygienists were started, one of the earliest being the one with which I am now associated in Rochester. We have lived fairly happily with the dental hygienist for thirty years . . . they haven't put us out of the business yet. In fact, it is fair to state that those practitioners who employ hygienists are in business on a better and sounder basis than those who do not employ them.

Might it not be true that if we allowed the dental hygienist to operate below the gums, they might help our business rather than spoil it? Might it not be true that if we allow them to apply flourides to the teeth, and offer a real prophylactic service, they would bring many patients to the dentist who would not otherwise come? Might it not be true that this procedure in the hands of the hygienist would at least be self-supporting and would bring many children to the dentist in time to have their teeth saved? In other words, a broader use of hygienists' services could be a definite practice builder for the dentist.

Maybe we can go a stage further. Maybe certain types of fillings or other types of operations could be relegated to the hygienist. If this were done I think the same principle would apply in dentistry that has in medicine—that the use of controlled auxiliary personnel will contribute to the strength of the central body of the profession rather than weaken it. I feel relatively sure that this would be the case in dentistry.

As perhaps you know, there has been an experiment in progress in one part of the world for many years, in which dental hygienists (they are not called "hygienists" but "dental nurses") are permitted to place fillings in children's mouths. These girls who were given a two-year period of training (after what would be about the equivalent of one year of college in this country) were

allowed to place the amalgam and cement fillings in the mouths of school children, all work being done in the school buildings or clinic provided by the community, and all of the work being inspected.

These girls were given the title, "Dental Nurse," because it was thought that that title would make them feel that they had the same relationship to the dental practitioner that the nurse had to the medical practitioner—namely that she didn't make decisions but she simply carried out instructions.

How does it work out? I have practised in New Zealand, worked in hospitals there, and was an instructor in a dental school in New Zealand. It was a universally accepted fact that if a child patient came into your office who had posterior teeth well filled (these girls were not allowed to work on the visible surface of anterior teeth) and well polished, you could be sure that that work had been done by a dental nurse and not by a dental practitioner.

I offer this experience in New Zealand not as an example of what should be done here, but merely as a report on the broad type of approach which can be made to supplying dental service and as an indication of the distance to which, under certain conditions, dentistry could go.

The way that has worked out in New Zealand is this: "The dental nurses" are permitted to fill posterior teeth, but not anterior teeth. What does that mean? That means that instead of a small minority of the children going to the dentists to get work done on anterior teeth, a large majority of them now go to the dentist. In other words, by having this service universally available, by having the children broken in to going to a dentist or getting dental work done in their mouths, an interest in good dental health is stimulated. The result has been that in New Zealand, a much greater percentage of the child population goes to the

dentist than ever before and most of them require only the types of service which dentists prefer to give. In other words, the dentist hasn't lost but has gained from the program.

I have offered the above as an example of one of the many areas in which if we are not too timid and if we realize that dentistry is not to be a completely inflexible organization

change may be possible. By being broad-minded, by looking at our problems from the broadest possible background it should be possible to do something which will contribute to providing dental service at low cost, and to equalizing its distribution, but at the same time will bring more patients to the dentist, and help him to live a less arduous but no less profitable life than at the present time.

ANNOUNCEMENTS

Montreal Fall Clinic

The 24th Annual Fall Clinic under the auspices of the Montreal Dental Club will be held at the Mount Royal Hotel, October 27-29, 1948. The preliminary program is as follows:—

Progressive Clinic on "Periodontia" consisting of three sessions divided into Scaling, Grinding, and Packing by D. P. Mowry, D.D.S., F.A.C.D., Dean of the Faculty of Dentistry, McGill University, assisted by Drs. W. F. Walford and P. J. Gitnick of the department of Periodontia, Faculty of Dentistry, McGill University.

Registered Clinics:—

"Amalgam": G. W. Johnston, D.D.S., Toronto.

"Hydrocolloid Techniques": J. B. Miller, New York.

"Acrylics in Crown and Bridge Work": W. C. Wohlforth, Commander (DC) USN.

"Mouth Reconstruction": W. C. Bushell, D.D.S., Montreal.

"Immediate Full Dentures": H. L. Esterberg, D.D.S., F.A.C.D., Boston.

"Silicate Restorations": G. W. Ferguson, Commander (DC) USN.

"Radiographic Examinations": J. C. Eselman, D.D.S., F.A.C.D., Pittsburgh.

"General Plan of Mouth Care": P. G. Anderson, D.D.S., Toronto.

Essayists:

Prof. E. G. D. Murray, McGill University, "Bacteriology and Immunology."

H. A. Hartman, D.D.S., Cleveland, "Clinical Photography."

C. F. Morgan, D.D.S., Washington, "Sulphonamides and Antibiotics."

Detroit's Seventh Annual Dental Review *Wednesday and Thursday, November 3 and 4, 1948,* *Hotel Book Cadillac.*

A two day meeting consisting of Essays—Limited Attendance Clinics—Table Clinics—Commercial Exhibits—Luncheon and Banquet. For program and reservations write to:

DR. LEON A. KATZIN, *General Chairman,*
4421 Woodward, Ave., Detroit 1, Michigan.

Believe me when I tell you that thrift of time will repay you in after-life, with a usury of profit beyond your most sanguine dreams; and that waste of it will make you dwindle alike in intellectual and moral stature, beyond your darkest reckoning.

W. E. Gladstone.



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MANITOBA:

J. F. Morrison, Winnipeg

BRITISH COLUMBIA:

**Leslie G. Robinson,
New Westminster**

Editorial

**CANADIAN DENTAL ASSOCIATION'S
ANNUAL CONVENTION**

Our National Convention was held this year in June at the Manoir Richelieu, Pointe-au-Pic, Quebec, under the auspices of the Canadian Dental Association and the College of Dental Surgeons of the Province of Quebec.

With ample room for everyone amid surroundings of superb beauty, in a hotel the walls of which are literally covered with some thousands of original pictures, valued in the millions; with a championship golf course near by laid out amid the charming hills overlooking the St. Lawrence; with an attractive pool and all other summer sports close at hand one could not help but be stimulated, made happy and refreshed. It was in such an atmosphere that about four hundred dentists and their wives gathered to enjoy a very interesting program arranged by that man of outstanding executive ability, Dr. Gustave Ratté of Quebec City, and his enthusiastic committee.

The essays and clinics splendidly arranged by Dr. Philippe Hamel, also of Quebec City, covered nearly every important field of dentistry and were worth going a long way to attend. But that does not mean that the four hundred dentists present heard all of these lectures and attended all of the clinics. The temptation to enjoy "God's Out-of-Doors" was just too strong to be overcome. Because about twenty percent attended the lectures given by men of international reputation does not mean that the convention was not a success for it was a great success, however it does emphasize the fact that if conventions are to be held amid such attractive surroundings

that more time should be allowed on the program to participate in these outside attractions. The same condition prevailed a year ago at Digby and we suggested editorially at that time that we might add a few days to our convention dates, if necessary, that we could work hard in the mornings and perhaps listen to a fine address in the evening but that we might have the afternoons for recreation and that the sum total of the beneficial effect would be greatly enhanced.

Our next meeting is to be held in Saskatoon, Saskatchewan, and we can be assured that the men of the prairies will leave no stone unturned to stage a convention of outstanding merit. It is to be hoped that a great many from Eastern Canada will plan even now to go to Saskatoon and from there on through the Rockies to the Pacific Coast, a trip which will be long remembered.

Our new president, Dr. H. J. Merkeley, of Winnipeg, is a man of proven ability and we can safely leave matters in his capable hands. At the Manoir Richelieu he was installed in office by Dr. Philippe Hamel whose fine address on this occasion will bear repeating and is as follows: (*The italicized words are the writer's.*)

"The time has come to change pilots while our ship remains on her course headed for the shores of Health and Beauty, being acclaimed, all along her difficult journey, by a thankful humanity.

"On the St. Lawrence River, it is customary to change pilots at Pointe-au-Père. With your permission, we shall make an exception to that navigation rule and take on our new pilot or leader right here, at Pointe-au-Pic. (*Where our dental meeting was being held*).

"It has been said that a ship resembles an old maid, because she keeps clear of the buoys. Our ship has nothing in common with an old maid, with all due respect to those fading beauties who refused to share life with the terrible opposite sex.

"Our ship is young, elegant, speedy and attractive; qualities, Alas! mostly vanished for the past-maidens. At her helm, some two years ago, stood a remarkable Crowe, (*Past president of C.D.A.*) who attracted thousands of seacrows, also called seagulls, flying graciously around her or resting peacefully on her masts. Yes, our ship is beautiful, speeding all sails out, on the calm sea of science, surrounded by these white birds, representing mankind, singing joyfully their gratitude to Dentistry on the way to its sublime destination. Thousands of seagulls but only one Gullett (*Secretary of the C.D.A.*) to be seen! He is the lucky mascot on whom the pilot places all his faith. Yes, our ship is beautiful. How could she be otherwise when she has just left the hands of a renowned Carver. (*Immediate Past President of C.D.A.*)

"Dr. Howard J. Merkeley, a sailor from the midwest where no ocean is in sight for thousands of miles, yet a born pilot, is going to board the ship. We can rest safely with this strong minded and kind hearted confrère on deck, for the union of both these qualities make the best of leaders. Dr.

Merkeley has been chairman of many societies. In fact, he has been head of all the dental societies of a vast region in Western Canada; evidently he is a born chairman besides being a pilot.

"In ancient China, it was a ritual to kiss a newly born baby on the forehead, if you wished him to be an intellectual; on the mouth, if you wanted him to be an orator; and on the heart, if he was to be a clergyman or a priest; on the feet, if you hoped him to be a traveller, and so on. I know not where Dr. Merkeley would have been kissed, had he been born in old China, but he was surely a chairman right at his birth. This is our good fortune.

"Dr. Merkeley, I have been given the honour to hand over to you the steering wheel of our ship. May this heavy task be light to your strong shoulders and cultured mind. Remain assured of our co-operation in all encountered difficulties. We shall acclaim heartily your successes and share your sorrows. We shall be faithfully on the lookout, at the main-mast head. Should ill winds blow too strongly in your sails, you will find us ready to take in reefs. Meanwhile, speed all sails out on the sea of science towards the shores of Health, Beauty and Kindness. May God bless you and our profession."

And thus was brought to a close a convention long to be remembered for unusual hospitality arranged so splendidly by our French confrères in the eastern part of this great Canada nor can we forget the gracious way in which the ladies were looked after by the ladies' committee under the leadership of Mrs. J. Hamel.

Thomas Jefferson said "The world is all gates, all opportunities to him who can use them". Our French confrères recognized their opportunities in staging this convention and used them not only to the benefit of those who were fortunate enough to attend but to the benefit of the dentists throughout Canada.

M.H.G.

CORRESPONDENCE

Unjust Government Action

TO THE EDITOR:

Recent additions to the list of manufactured goods which are prohibited or subject to quota or allocation regulations, appear to include dental chairs and other dental equipment manufactured of iron or steel. The total of imports of articles of this class into Canada do not normally exceed one-half million dollars annually, and are therefore not a serious factor in influencing international exchange or in consumption of United States dollars.

The Department of Trade and Commerce has access to the records of the Statistics Branch at Ottawa and can easily establish the correctness or otherwise of the estimates of

imports above quoted.

The profession of Dentistry is rendering an important health service not only directly to the Canadian people but through universities teaching dentistry, to the continued production of well-trained and educated dentists to meet the growing demands for dental services from an increasing population. Many municipal, provincial and federal hospitals and clinics, as well as the permanent military and naval forces as also our military hospitals and D.V.A. who are providing dental care, naturally increase the need for equipment essential to the practice of Dentistry.

It would therefore appear reasonable and just to solicit the consideration of our Domin-

ion Government in granting relief to the dental profession in exempting from some of the import regulations — goods, appliances and equipment made and sold exclusively for the use of dentists.

This letter is being forwarded to the Deans of all Dental Faculties in Canada, as well as to the provincial Dental Associations and the Canadian Dental Association. It is sent as a suggestion only, with the hope you will make

representations, in the name of your Association, to the Department of Trade and Commerce, Ottawa, asking consideration for the special requirements of dentists and Dentistry.

Yours very truly,

S. S. WHITE COMPANY OF CANADA LIMITED
C. A. McKenna.

EDITOR'S NOTE:—It would appear that the above problem calls for some definite action by the Canadian Dental Association. Anything which interferes with the health of the Canadian people is naturally a matter of deep concern to every dental practitioner.

NEWS FROM THE PROVINCES

SASKATCHEWAN

Saskatoon Dental Society

Officers of this society elected at the last meeting for the year 1948-49 were:

Pres. Dr. C. B. Hallett
Vice-Pres. Dr. R. E. Dickson
Sec.-Treas. Dr. S. Gelmon

Dr. J. N. Papove was presented with a Ronson table lighter, as he was leaving for California where he plans on making his home. Several members paid tribute to his membership in the Society over the past 12 years and all expressed regret at his removal from the Society.

L.D.H.

BRITISH COLUMBIA

Victoria and District Dental Society

At the annual meeting of this Society, held in May, the following officers were elected:

President Dr. A. S. Webster
Vice-President Dr. C. Usher
Sec.-Treas. Dr. W. N. Westwood
Executive Committee: Dr. A. H. Gunning,
Dr. C. B. Mess, Dr. J. D. Johnson.

In his annual report, Dr. J. D. Johnson, retiring president, thanked members of the Society for their co-operation and faithful attendance at the seven regular and two special meetings held during the past season.

Newly elected to membership in the Society was Dr. V. V. Marnell. This brings the total membership to fifty-five.

Throws Child Out of Window

When the news headlines proclaim in glaring letters "City Dentist Throws Child Out of Upstairs Window", or words to that effect, we should not be too hasty with our interpretation. Dr. Frank Smith, well known dentist of Vancouver, was recently faced with the necessity of doing just that, when he and Mrs.

Smith awoke at four o'clock in the morning, to find their house on fire and the bedrooms filled with smoke. Mrs. Smith jumped from an upstairs window, landing safely on soft earth, and then waited beneath the nursery window while the Doctor dropped the child into her arms. The Doctor then leaped to safety, suffering slight burns, and extensive cuts from broken glass.

Vancouver Dental Assistants' Association

The regular monthly meeting of this Association was held in the Hotel Vancouver on June 14, with forty-nine members present.

Mrs. Winn Saunders, member of the faculty of the Portland Dental College, and President of the Portland Dental Assistants' group, was the guest speaker of the evening. Her first paper was entitled "What a Dental Assistants Society Can Mean to You." This was followed by her main subject "Anatomy". Later, Mrs. Saunders gave a demonstration on x-ray technique.

On June 21, the first capping ceremony was held in the Medical-Dental auditorium, at which time thirty-three dental assistants were given their caps and pledges by Dean Swanson.

Pacific Coast Dental Association

Dr. Harold Cline, formerly Editor for the Province for the *Journal*, recently returned from the Convention at Murray Bay, where he gave a clinic on "Gold Foil", and is away again to Salt Lake City for the Conference of the Pacific Coast Dental Association. He has served well as Councillor for the Conference, and is taking part in a presentation by the Vancouver Dental Study Club, as well. Others from the Vancouver Study Club are Doctors G. C. Darts; K. P. Donnelly; J. W. Gallagher; J. R. Ingledew; G. I. Plant; I. E. Snyder;

K. A. Oviatt; W. K. Sproule; D. J. Sutherland; J. M. Wark and C. M. Whitworth.

Dr. R. H. McDougall, of Victoria, presents a table clinic on "The Pressure Pack as an Aid to Subgingival Curettage." Dr. Lloyd Jacobson is to give a paper and will present slides and a table clinic on "Fine Amalgams". Dr. Lloyd Chapman, of Vancouver will have a table clinic on "Orthodontia and its Dependence on Other Phases of Dental Health." The Vancouver Ferrier Study Club will give a general clinic on "Gold Foil".

New Westminster Dental Assistants' Association

This Association was inaugurated at a March meeting. Dr. Emery Jones officiated, and spoke to the gathering. Dr. Nordan, of Vancouver, addressed the group at the April meetings.

L.G.R.

ONTARIO

Northern Ontario Dental Association Annual Convention, September 11, 1948

President, Dr. W. R. Somerville, will preside at this meeting which is being held in his home city—Haileybury. He has been ably assisted in preparations by members of his executive, particularly his secretary Dr. Willard Armstrong of North Bay.

This year Dr. W. B. Amy of Toronto, a well known dental teacher will be the chief speaker of the day. Men of the North will be on hand to demonstrate their loyalty and support their Society.

A welcome sign is always prominently displayed for visiting dentists and from experience the writer knows that Northern hospitality is wonderful. September 11 is Northern Ontario Dental Association's *Big Day*.

EASTERN ONTARIO DENTAL ASSOCIATION CONVENTION

**Chateau Laurier Hotel, Ottawa
September 19, 20, 21, 1948**

PROGRAM

SUNDAY, SEPTEMBER 19

11.00 a.m.—

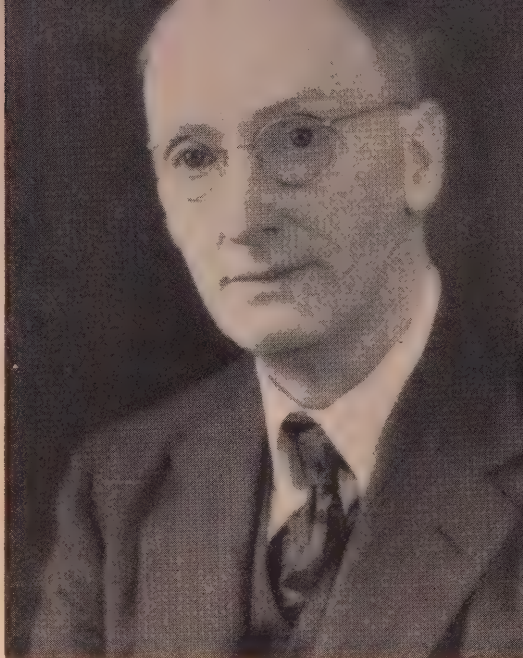
Golf: Ottawa Hunt Club.

Convener: Dr. W. Allen Armstrong.

9.00 p.m.—

Musical: Chateau Laurier.

Joint Conveners: Drs. E. S. Macartney and L. R. Braden.



DR. W. R. SOMERVILLE, President
Haileybury, Ontario

MONDAY, SEPTEMBER 20

8.30 a.m.—

Registration and Exhibits.

9.45 a.m.—

President's Address.

Appointment of Nominating Committee.

10.00 a.m.-12.30 p.m.—

Dr. R. O. Schlosser, Chicago.

A series of three lectures in sequence dealing with Preparation and Insertion of Immediate Upper Denture and Lower Gold Bar Partial or other Immediate Lower with all preparatory and final steps. (Lecture 1).

12.30 p.m.—

Joint Luncheon with Dentists' Wives Association.

Quebec Suite, Chateau Laurier. Guest Speaker: Mr. Russell Kelley, M.L.A., Minister of Health for the Province of Ontario.

2.00-4.00 p.m.—

Table Clinics: Dentists, Nurses and Exhibitors.

4.00-6.00 p.m.—

Dr. R. O. Schlosser, Chicago.
(Lecture 2).



DR. GEORGE W. BARRETT, *President*
Ottawa, Ontario

6.30 p.m.—

Public Health Dinner.

Speaker: Dr. George Clark.

8.00-10.00 p.m.—Exhibits.

TUESDAY, SEPTEMBER 21

9.30-10.30 a.m.—

Dr. P. G. Anderson, Toronto.

Title: Operative Procedures in the Plan
of Mouth Care—Part 1.

10.30 a.m.-12.30 p.m.—

Dr. R. O. Schlosser, Chicago.
(Lecture 3).

12.00 Noon—Exhibits.

12.30 p.m.—

Lunch where you wish.

2.00 p.m.—

Dr. L. D. Hampson, M.D.

Title: Anaesthesia Insulation to Chil-
dren.

2.30 p.m.—

Dr. P. G. Anderson. (Lecture 2).

3.30 p.m.—

Business Meeting.

4.30-6.00 p.m.—

Exhibits.

6.30 p.m.—

Dinner, Quebec Suite, Chateau Laurier.
Speaker: Dr. Swan, Kingston.

Registration Fee \$10.00

Includes: Luncheon and Dinner Monday.

Dinner Tuesday.

The Ladies' Committee will be on hand to welcome the Ladies. They are invited to the Monday Luncheon.

Mark off the dates: September 19, 20, 21, 1948. Chateau Laurier. Please make your own Hotel Reservations.

The executive of the Eastern Ontario Dental Association are very proud of the program arranged for their convention this year. The essayists and speakers are of the highest calibre and recognized for their achievements.

Dr. Rudolph O. Schlosser is a familiar figure to many Canadians for his contribution to dental prosthesis. He is professor emeritus of Prosthodontics at Northwestern University, Chicago and as a lecturer is in great demand.

Dr. P. G. Anderson, Professor of Operative Dentistry in the Faculty of Dentistry, University of Toronto is outstanding both as a lecturer and as an operator. His presentation deals with oral conditions as we find them and through operative means, how much we can do to prolong health and function in teeth that otherwise may be lost.



DR. R. O. SCHLOSSER

Dental Nurses' Alumnae Association

The Alumnae gave a tea in honour of the graduating class of dental nurses at the home of Mrs. E. M. Warnock, Avenue Road. The president, Miss Marion Barton, after welcoming the guests, presented the traditional gold crest ring as the prize for the nurse ranking highest in practical work during the course at the University of Toronto. Miss Joan Giddy of Port Hope received this prize and thanked the Alumnae for this much coveted gift. The Vice-President, Miss Barbara Browne, poured tea assisted by the Executive. The tea table looked lovely with pink and mauve tulips and mauve tapers.

The annual meeting of the Alumnae took place at the I.O.D.E. headquarters June 16. Mrs. Joe Keene reported 1030 cancer dressings were made during the year by the Alumnae. Each convener gave her report for the year now

ending.

The Executive for 1948-49 was elected as follows:

Pres. Miss Marion Barton
Vice-Pres. Mrs. Margo Carscadden
Recording Sec. Miss Bernice Baldwin
Corres. Sec. Miss Irene McKenzie
Asst. Corres. Sec. Miss Adrienne Rands
Treas. Miss Kaye McEwan

Committees: Entertainment Convener, Miss Dorothy Dearing; Welfare, Miss Elspeth Spence; Membership, Miss Marion Fleet; Publicity, Miss Jean Lindsay; Archivist, Miss Gertrude Whitehead.

Advisory Board: Dean R. G. Ellis, Dr. A. D. A. Mason, Dr. E. W. Paul. Mrs. Lola Sheridan was in charge of the nominations assisted by Miss Dorothy Quinn.

JEAN C. LINDSAY.

EMPIRE NEWS

GREAT BRITAIN

Health Service Superannuation Scheme

In accordance with the provisions of the National Health Service Act, 1946, the Minister of Health has established the Health Services Superannuation Scheme.

A dental practitioner who enters the National Health Service by being on the list of an Executive Council will pay 6 percent of his "remuneration" as his superannuation contribution, and the Executive Council will make a further contribution of 8 percent to the Scheme.

In return for the contributions paid to the Scheme, the dental practitioner is entitled to a wide range of benefits—retirement pensions plus a lump sum capital retiring allowances, short service gratuities in special cases, widows' pensions and death gratuities. The retirement pension is based on 1½ percent of "remuneration" for every year of contributing service. That is to say, when a practitioner retires his total "remuneration" during all the years of his contributing service is added up, and his pension is 1½ percent of that total figure. This pension is an annual allowance, paid by monthly or quarterly instalments. In addition to the retirement pension, the practitioner will also receive a lump-sum capital retiring allowance.

The amount of the widow's pension, which

is payable in the event of the practitioner's death after ten years' service, will generally be one-third of the amount which would have been payable by way of pension to the practitioner as at the date of his death.

In the event of a practitioner becoming permanently incapacitated after completing ten years' service, he is entitled to a superannuation allowance based on the length of his service up to that date.

The earliest age at which a practitioner can normally retire is 60, provided that by that age he has attained a minimum of ten years' service. The normal pensionable age, however, is 65, but the service of a practitioner can be extended beyond that age if the Minister gives his consent in any individual case.

Decision

*Condensed from Editorial in Br. D. Jour.,
 July 2, 1948*

By a majority of approximately six to one the Extraordinary Meeting of the Association at Birmingham endorsed the recommendation of the Representative Board that members should be advised not to take part in the general dental service under the Act and regulations as at present drafted.

If the Minister had agreed to amend the Act so that a whole-time salaried State Dental Service, to the exclusion of service given in private surgeries could not be introduced except

by a further Act of Parliament, as he has done in the case of the medical profession, and he had shown any disposition to meet the other points, grant-in-aid, greater clinical freedom, and members had felt that, in addition to enjoying a reasonable degree of clinical freedom, they need have no fears that the terms now offered to them might be changed to their disadvantage in the immediate future, the discussion might have taken a different course. As it is, the Minister has gone no further than to give an assurance that it is not his intention to introduce a salaried service for dentists working in private surgeries, and it has been made clear that, since the time factors which form the basis of the scale of fees have been arrived at upon insufficient evidence, the scale is to be reviewed within less than a year.

The Association is at one with the Government in desiring that the nation should be given the best possible dental service. Such a service however, cannot be founded on anything less than the willing co-operation of the great majority of the profession, and it is abundantly evident that that will not be forthcoming under the conditions which the Minister seeks to impose.

NEW ZEALAND

Health Services in New Zealand

by HUGH MacLEAN, M.D., F.A.C.S. and
DEAN E. McHENRY, Ph.D.,
Los Angeles, Cal.

Condensed from Canadian Med. Asso. Jour.,
June, 1948

Among the free nations of the world, New Zealand has done the most "advanced" experimenting with state intervention to furnish health services for all of the people. It is now ten years since provision for health benefits was written into the Social Security Act of 1938.

The essential feature of the New Zealand system of health benefits is that the state pays for basic medical, pharmaceutical, hospital, and some other services. Health benefits are universally available to the whole population without means test of any kind. Funds are raised through taxation. In compensating general practitioners, both capitation and fee-for-service methods are used, but the overwhelming majority uses the latter. Pressure from the profession led to three major concessions: the fee-for-service plan, the right of the doctor to charge the patient more than the

fixed fee, and state refund to the patients rather than direct collection by the doctor from the state fund. With these modifications, nearly all physicians in the country are practising under the act, although the organized profession and the Government have not been co-operating to the extent necessary for a proper functioning of the scheme.

Funds to finance the whole Social Security scheme are raised by a flat tax on all income (originally 5%, now 7½%). Additional moneys needed to finance the whole social security program, monetary as well as health benefits, are secured by transfer from the Consolidated Fund of the State.

The first jump was made on March 1, 1941, when medical benefits under the capitation scheme were made available. The patient had free choice of doctor and the doctor could accept or reject patients. No limit was placed on the number of patients a doctor could have under the capitation plan. Capitation is still in operation, but has declined fairly steadily in use.

Soon after the capitation plan was inaugurated, it became obvious that the medical profession would not cooperate under that system to an extent sufficient to get medical care to all of the people. The Government then began to consider seriously the instituting of a fee-for-service plan. The fee-for-service system was put into effect on November 1, 1941. The right to charge over the fixed amount was also granted.

Professional services are rendered and the patient billed for the customary amount. On receiving payment, the doctor issues a receipt to the patient, who could submit it, along with an appropriate form, and secure a refund of the fixed amount allowed from the fund. A committee of the B.M.A. summarized the advantages of this system as follows:

"This method causes the least interference with normal conduct of practice. The relationship of doctor and patient is not intruded upon by any interested third party. The doctor can give his patient the attention and service he requires, and graduate his charges thereto. The patient retains some responsibility for his own treatment."

The Department of Health has found the refund system difficult and very expensive to administer. Around 30% of the refund forms are incorrectly filled out by patients, necessi-

tating further correspondence and delay before payment can be made.

Out of the fee-for-service plan, with its provision for remuneration either by refund or direct claim, emerged the token system. The doctor makes a direct claim for the statutory fee on the fund and also receives an additional payment from the patient. The profession has given this mixed method of remuneration the name of "token".

From the Department's point of view, token is preferable to refund, largely because direct claims from doctors are easier to pay and cheaper to administer than refund applications. The patient has every reason to favour token over refund, because he is relieved of the necessity of filling out forms and going to the Post Office to cash his warrants.

The Social Security Act empowers the Minister of Health to make special arrangements in order to provide medical services for people living in remote areas. This has been provided mainly by salaried medical officers. The base salary is high enough to attract young doctors into sparsely populated back-blocks that would

have little chance of medical service under ordinary conditions. The salaries offered range from £1,100 to £1,700 per year, and the doctors are also permitted fee-for-service for patients not ordinarily resident in the district.

School medical services have been expanded to include free milk and apples in the schools, health camps and aggressive health education campaigns.

The dental services are extremely comprehensive, including dental nurses and free service up to the age of 19. The nurses were developed in order to supplement the shortage of dentists: they do extractions and fillings and much routine work. This development is fully supported by the dental profession.

Saliva Examination

The Dental School at Dunedin is prepared to undertake the laboratory examination of saliva, including *Lactobacillus acidophilus* counts, for patients of dental practitioners throughout New Zealand. A small fee will be charged.

GENERAL NEWS

U.S.P.H.S. Prepares Plans to Send Topical Fluoride Demonstration Teams Into Each State and Territory

Plans for the establishment of topical fluoride demonstration projects in each state and territory of the nation during the next 12 months were completed at a three-day conference of state dental directors, dental society officials and state and territorial health workers held at Washington, D.C., on June 23, 24 and 25 under the sponsorship of the U.S. Public Health Service.

A total of 41 states and two territories were represented. According to plans worked out at the conference, demonstration teams will be sent only to those states who file formal requests with the U.S.P.H.S. In each state, the teams will operate on a mobile basis in close cooperation with state health departments and state dental societies. Each team will consist of a dentist, two dental hygienists and a clerk. Whenever feasible the team will operate in school buildings and topical fluoride treatments will be provided for both pre-school and elementary school children on a limited basis.

All local dentists will be invited to visit the demonstrations as they are held in various communities to observe the technique of application of sodium fluoride solutions. The program is being financed under a \$1,000,000 appropriation voted by the 80th Congress to encourage the use of topical fluorides as a caries control measure. The actual program is expected to be underway in several states within 60 days.

Dental Assistants' Course at University of Detroit

Because of the demand from both dentists and the Dental Assistants' Association, the University of Detroit inaugurated a course for dental assistants in February of this year. The first evening course of 100 hours instruction has been given to girls already employed in dental offices. It is anticipated a similar course extended to a full year will be open to high school graduates in September. Thus a new career for young women is established.

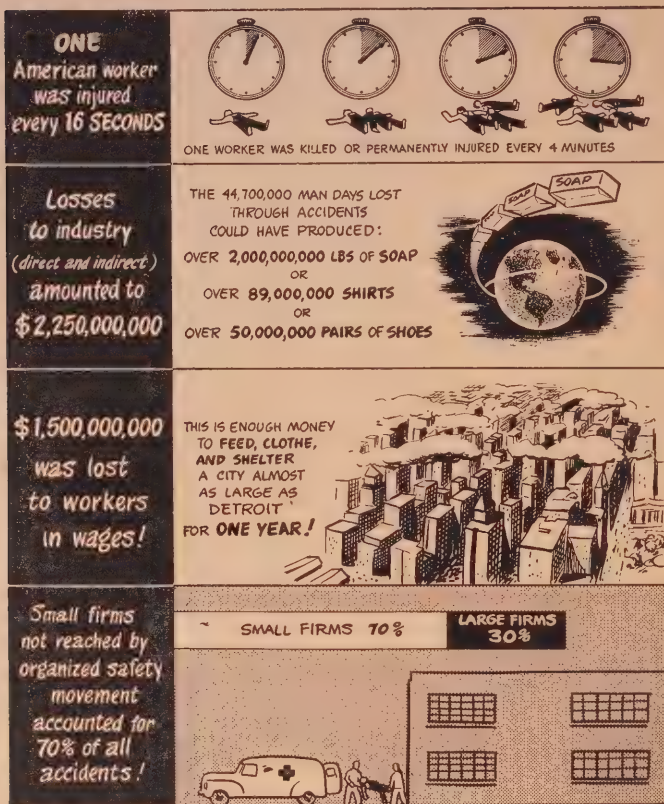
The course includes lectures and demonstrations in the fundamentals of all the subjects

enumerated below which a well-trained dental assistant should know, and a certificate will be given to all students successfully passing a final examination. The following subjects are included: telephone technique; bookkeeping and typing; drugs used in dentistry; dental radiography; bacteriology and sterilization; dental nomenclature; dental anatomy and

physiology; laboratory technique; nutrition; psychology of handling patients; office practice and management; visual education; ethics.

The bookkeeping and typing courses are given Monday evenings, six to nine o'clock on the main campus, while the other subjects are taught at the Dental School, Wednesday and Friday evenings from seven to nine o'clock.

THE TOLL OF JOB ACCIDENTS



INDUSTRIAL SAFETY CONFERENCE

Here are some facts about accidents that highlight the need for the President's Industrial Safety Conference to be held in Washington September 27-29. The U.S. Department of Labour is in charge of planning and arrange-

ments for the conference which will seek a practical, nation-wide solution for preventing work injuries and deaths. Participation of management, labour, private safety groups, and other interested parties is being planned.



PHOTO TAKEN AT C.D.A. GOVERNORS' MEETING

The above picture was taken at the Annual Meeting of the Governors of the Canadian Dental Association held at The Manoir Richelieu, Murray Bay, June 1948. Included with the Governors are C.D.A. Committee chairmen and some committee members.

Front Row, left to right—J. S. Bagnall, Halifax, N.S.; D. T. Wayne, Charlottetown, P.E.I.; G. de Montigny, Montreal, Que.; R. P. Lowery, Toronto, Ont.; C.A.E. McCabe, Valleyfield, Que.; C. W. Sheridan, Ottawa, Ont.; J. A. Bothwell, Toronto, Ont.; S. J. Phillips, Oshawa, Ont.; G. M. Dewis, Halifax, N.S.; D. S. Coons, Hamilton, Ont.; E. Vinet, Montreal, Que.; R. R. McIntyre, Calgary, Alta.

Back Row, left to right—A. J. Coughlin, Saint John, N.B.; Col. E. McK. Wansbrough, Ottawa, Ont.; L. J. D. Fasken, Regina, Sask.; W. M. Blair, Regina, Sask.; H. Baden Powell, Calgary, Alta.; W. G. McIntosh, Toronto, Ont.; J. F. Morrison, Winnipeg, Man.; Harry S. Thomson, Toronto, Ont.; Arnold Mitchell, Montreal, Que.; J. H. A. Swales, Toronto, Ont.; G. V. Fisk, Toronto, Ont.; Harry W. Reid, Toronto, Ont.; M. H. Garvin, Winnipeg, Man.; J. K. Carver, Montreal, Que.; J. M. Chamard, Montreal, Que.; H. J. Merkeley, Winnipeg, Man.; Don W. Gullett, Toronto, Ont.; G. Ratté, Que., P.Q.; P. G. Anderson, Toronto, Ont.; H. M. Cline, Vancouver, B.C.; W. Scott Hamilton, Edmonton, Alta.; Geo. Cameron, Ottawa, Ont.; E. Charron, Montreal, Que.; V. D. Crowe, Truro, N.S.; G. H. Campbell, Orangeville, Ont.; Denis Forest, Montreal, Que.

German Dentist wishes Canadian Contacts

Doctor J. Diederich, prakt Zahnarzte, Germany, desires to correspond with Canadian dentists who may be interested in such correspondence relative to dental problems in general.

Identification of Flying Personnel in Denmark from Tandlagebladet

Legal odontology has been applied in a new field in Denmark. All flying personnel in the Danish Airlines have been investigated and complete individual identification records have been made, including fingerprints, general and special anatomical description, minute description of personal effects always carried, and a complete dental record.

Bitter experience has taught authorities that identification of bodies killed through an airplane crash may prove very difficult.

Raise Tuition in Harvard School of Dental Medicine

James B. Conant, president of Harvard University, announced on April 5 that there will be an increase in tuition for all students in the Harvard School of Dental Medicine and in the Harvard Medical School. Tuition, which has been \$580 a year since 1945, will be raised to \$800 a year beginning in the fall term of 1948.

Special Draft of Dentists Eliminated in U.S.A. Selective Service Law

Plans Announced for Deferment of Dental and Pre-Dental Students

The special draft of dentists, physicians and other professional personnel up to 45 years of age as proposed by the Armed Services committees of both the Senate and the House of Representatives was eliminated in the draft

law adopted by Congress in the closing hours of its session on June 20. Under the law as finally approved, dentists and physicians, like all others, can be drafted only if they are under 26 years of age.

The new draft law provides for special deferment on an individual basis for full-time students of dentistry, medicine, science, engineering and those preparing for the ministry. Under this provision it is expected that most dental students will be allowed to finish their professional training. It is also expected that sufficient number of pre-dental students will be deferred to maintain full enrollments of freshmen at dental schools.

F.D.I. to Hold 1948 Annual Session in Dublin in August

The 1948 annual session of the *Fédération Dentaire Internationale* will be held in Dublin, Eire, August 2 to 8.

The annual meetings are devoted to the preparation of the quintennial international dental congresses and are particularly interest-

ing to those dentists who intend to collaborate in the preparatory work of these congresses or who wish to make researches on subjects which form the agenda of the various commissions: dental hygiene, education, documentation and legislation, public dental service, scientific research, terminology and publications. The next International Dental Congress will be held in London in 1952.

New Radio Series on Health in U.S.A.

The Chicago Industrial Health Association has just signed Ben Park, noted radio script writer, to do a new documentary series on the subject of health. The new series will take up one of the vital issues now facing Chicago—the problem of creating awareness, especially among wage earners, of safeguarding health. The program will work in cooperation with all the agencies now allied with the association—the Chicago Medical Society, the Chicago Dental Society, The Board of Health and 27 other health and medical agencies.

IN MEMORIAM

Archie Laughton Johnson, of Vancouver, B.C., aged 62, died July 25. He was graduated from the University of Toronto in 1908.

He went overseas in the first war as a Major, second in command of the 229th from Moose Jaw and was transferred to the Dental Corps overseas.

He practised in Hartney, Manitoba, and Moose Jaw, Sask. before moving to Vancouver in 1925. From that time he was associated with Dr. Elwood Cox in the practice of Drs. Cox and Johnson.

He was a member of the staff of the Vancouver General Hospital and in charge of Dental Services for T.B. Control for B.C. He was a member of the Rotary Club and Point Grey Golf Club, a life member of Beaver Lodge No. 83 A.F. & A.M. at Strathroy and a life member of the Lodge of Perfection, Scottish Rite at Moose Jaw, Sask.

Dr. Johnson is survived by his widow in Vancouver, one son Kenneth in Regina, two sisters, Mrs. Sadler in Sarnia and Mrs. Rorison in Moose Jaw, and one brother, Dr. Kenneth M. Johnson, of Winnipeg.

Frank Britton, of Brantford, Ontario, 82, died June 24. He was a member of Brant Avenue United Church and had served on the official Board and in the choir. He was a charter member of the Schubert Choir and a member of the Brant Lodge, A.F. & A.M. In 1946 he was honoured by the Brant County Dental Society at a dinner marking his fifty years in dentistry.

S. Clements Aikins, Ottawa, Ontario, aged 55, died June 25 after a lengthy illness.

He was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1921. He immediately began to practise in Ottawa where he continued until 1945. During his years of service he made many friends in the Capital City and his death is a great personal loss to those who knew him well.

He was a member of Parkdale United Church, Ottawa Dental Society and the Byng Fish and Game Club.

Dr. Aikins is survived by his widow, one sister and four brothers.

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LES APPAREILS DE MAINTIEN

par DELBERT BOUDREAU, D.D.S., Gravelbourg, Sask.

La dentisterie juvénile, communément appelée la pédodontie, est une branche très complexe de l'art dentaire. Elle atteint l'enfant au plus bas âge et le suit jusqu'à la puberté. Pour bien des praticiens, la pédodontie est un cauchemar, du fait que les parents comprennent mal et que les praticiens n'insistent pas assez. Le docteur Lous Lépine dans son article, la "Prévention des Malocclusions" nous souligne qu'on parle rarement de pédodontie, de dentisterie pour les enfants, par conséquent de prévention.

Dans les quelques considérations qui suivront, nous parlerons d'un problème spécial concernant la pédodontie, notamment celui de prévenir les malocclusions au moyen d'appareils de maintien.

Chaque fois qu'il y a perte prématurée d'une dent temporaire le problème de l'appareil de maintien s'impose, pour permettre au maxillaire un développement normal et pour prévenir les malocclusions. Cependant l'emploi des appareils de maintien ne semble pas populaire. Le département d'orthodontie de l'Université de Montréal est à même de nous en donner des explications avec preuves. Nombreux sont les cas de malocclusions causées par la perte prématurée d'une ou plusieurs dents temporaires ou même de dents permanentes jeunes.

Souvent la vitalité de la dent temporaire est atteinte et le seul moyen de soulager le patient est l'extraction. La dent permanente n'est pas prête à faire

son éruption. Il faut attendre quelques mois; pendant ce laps de temps, la nature fait son effort et souvent cet effort vogue en mauvaise direction, nous apportant comme conséquence toutes sortes de complications imaginables. L'appareil de maintien est là pour prévenir ces complications.

Selon Ellis, l'appareil de maintien remplit plusieurs rôles: 1) Maintenir l'espace ou empêcher les dents de voguer dans des mauvaises positions.

2) Prévenir les mauvaises habitudes de phonation.

3) Améliorer l'esthétique.

E. H. Colby affirme que la perte d'une dent temporaire ou permanente nécessite, chez les enfants, une restauration temporaire en attendant un traitement permanent. Ces restaurations temporaires sont des appareils de maintien fixes ou mobiles. L'Université de Minnesota favorise plutôt les appareils fixes chaque fois qu'il est possible pour diverses raisons:

1) Les appareils de prothèse partielle pourraient empêcher le développement normal des arcades.

2) La fonction des dents supportant les crochets serait "handicapée."

3) Le développement mental de l'enfant pourrait être une contre-indication du dentier partiel.

4) Le dentier partiel causerait trop de congestion hyperhémique.

5) L'appareil mobile pourrait falsifier la phonation.

6) Le dentier partiel n'est pas plus hygiénique que l'appareil fixe.

7) La valeur esthétique de l'un et l'autre s'équivaient.

8) Dans la majorité des cas étudiés à l'Université de Minnesota, l'appareil fixe serait plus satisfaisant.

Galloway dans son article "Contraindications for Space Maintainers in the Mouths of Children" dit qu'après perte d'une dent temporaire, si l'examen démontre que la permanente ne fera pas son éruption avant 6 mois, il y a lieu d'employer un appareil de maintien. Dans le cas où le follicule de la dent permanente manque, les appareils de rétention sont surtout contre-indiqués. Cependant, dans certains cas, l'emploi d'appareil de maintien est recommandable pour le développement du maxillaire.

Pour ce qui est du développement des arcades, Cohen fait les remarques suivantes:

1) La croissance latérale est plus prononcée dans la région des canines. Ce développement a surtout lieu pendant l'éruption des incisives permanentes.

2) La distance entre les deux canines inférieures atteint son maximum vers 8 ans et demi. Au maxillaire supérieur, le développement de canine à canine est plus intense de 5 à 8 ans pour se terminer à 12 ans.

3) En haut la distance entre la face mésiale de la canine et la face distale de la 2^{ème} bicuspide du même côté diminue peu, tandis qu'en bas il y a une grande diminution.

4) Le développement des maxillaires surtout celui de la mandibule présente des caractères différents chez les deux sexes.

Chez les jeunes enfants de moins de 5 ans, lorsqu'il y a perte de dents antérieures, McBride recommande l'emploi du pont fixe de Willet comme appareil de maintien. L'emploi de partiel serait trop difficile à cause de l'occlusion fermée et du manque de rétention.

ETUDE DE CAS

Pour mieux illustrer le but des appareils de maintien, nous allons entreprendre l'étude appliquée d'un cas.

Avant d'établir le traitement opportun du cas, il y a lieu de faire un examen complet du patient en considérant son âge, son état général, ses empreintes, son occlusion et sa radiographie.



FIG. 1.

Modèles: vue antérieure.
Noter la relation des arcades, la fonction de la latérale supérieure droite et l'espace entre la latérale et la centrale gauche.

Description: Le patient est un jeune garçon, âgé de 8 ans et sept mois, en bonne santé et d'apparence générale bonne. Son développement chronologique correspond à son développement intellectuel.

Modèles: La prise d'empreinte se fait de manière ordinaire avec des substances à la mode. Quant au modèle, en voici les détails:

a) Le patient ne possède aucune dent temporaire.

b) Les temporaires n'ont pas toutes été remplacées par les permanentes.

c) La centrale permanente droite supérieure manque.

d) Les dents actuellement présentes sont:

En haut à droite: la latérale supérieure droite en éruption complète, les première et deuxième prémolaires supérieures, droite, sont en éruption incomplète, la première molaire supérieure droite est en éruption complète.

En haut à gauche: La centrale supérieure est en éruption complète, mais avec fracture du bord incisif exposant la dentine, la latérale supérieure est en éruption incomplète, la première prémolaire est en éruption incomplète. La première molaire est en position normale.

Pour le haut, les deux canines ne sont pas encore en éruption, ainsi que la deuxième prémolaire. Et la centrale supérieure droite manque.

En bas à gauche: La centrale et la latérale sont en éruption complète. La cuspidé buccale de la première prémolaire commence à apparaître. Les deux cuspidés de la deuxième prémolaire sont en éruption. La première prémolaire est en éruption complète.

En bas à droite: La centrale et la latérale inférieure droite sont en éruption complète. La cuspidé buccale de la première prémolaire est en éruption complète. La première molaire est en position normale. En bas les deux canines ainsi que la deuxième prémolaire n'ont pas encore commencé leur éruption.

Maintenant si nous considérons l'espace entre les dents, nous remarquons certaines particularités. L'espace entre la centrale supérieure gauche et la latérale droite est trop large. L'espace entre la latérale supérieure droite et la première prémolaire supérieure droite est insuffisant pour permettre l'éruption normale de la canine. L'espace entre la première prémolaire supérieure gauche et la molaire est trop étroit pour permettre l'éruption normale de la deuxième prémolaire. Ajoutons que la latérale droite supérieure a distalé en pivotant disto-buccalement. La prémolaire supérieure gauche a une tendance à pivoter mésio-lingualement.

L'occlusion: La prise d'occlusion nous révèle les détails suivants: Du côté droit, la cuspidé mésio-buccale de la première molaire supérieure tombe dans le sillon mésio-buccal de la première molaire inférieure. La cuspidé disto-buccale de la première molaire supérieure tombe dans le sillon disto-buccal de la première molaire inférieure. La crête mésio-buccale

de la première molaire inférieure tombe dans l'espace entre la 2ème prémolaire supérieure et la première molaire supérieure. La cuspidé mésio-linguale de la 2ème molaire supérieure tombe dans le sillon central de la première molaire inférieure. L'angle mésio-incisif de la latérale supérieure touche au tiers incisif disto-labial de la latérale inférieure droite.

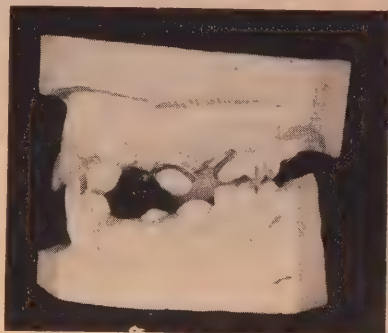


FIG. 2.

Modèles: vue latérale. On remarque, la malrelation de la première molaire supérieure avec son antagoniste, et la position des crochets.

Du côté gauche, la première molaire supérieure ne possède pas une articulation normale avec son antagoniste. Elle a mésialisé d'environ 2 millimètres. La latérale supérieure gauche articule avec la surface disto-labiale de la latérale inférieure.

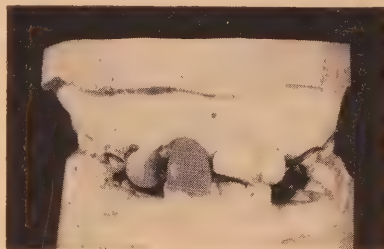


FIG. 3.

Les modèles: vue de face antérieure. On remarque la relation des arcades, la position des dents et la relation de l'appareil avec les dents et les arcades.

rière. Elle n'articule pas avec la centrale inférieure. Des huit dents actuellement présentes au maxillaire supérieur,

cinq seulement articulent avec quatre antagonistes.

Le développement de la latéralité des maxillaires est à peu près terminé. Il n'y aura donc peu de changement dans la région des dents antérieures. Cependant il y aura développement antéro-postérieur, c'est-à-dire un développement postérieur aux premières molaires pour permettre l'éruption des deuxième et troisième molaires. (Fig. 1,2,3)

La radiographie: Par la radiographie, nous voyons que la calcification osseuse est dans un état normal. Les dents ne sont pas encore complètement calcifiées, mais ceci est normal si nous considérons l'âge du patient. L'ouverture des apex est encore considérable surtout celle des prémolaires. La canine supérieure droite se trouve dans une position oblique par rapport aux dents voisines. Le côté mésial de la couronne de la canine supérieure droite fait pression sur le tiers moyen de la racine de la latérale supérieure droite. L'espace entre la première prémolaire supérieure droite et la latérale supérieure droite est insuffisante pour permettre l'éruption de la canine. La première molaire supérieure droite présente une carie du troisième degré et une zone plus sombre à l'apex de l'une des racines, laissant voir une infection apicale.

La canine supérieure gauche n'est pas encore en éruption. Elle se trouve en position normale entre la latérale et la première prémolaire. Les canines sont encore enveloppées de leur sac adamantin. La deuxième prémolaire supérieure gauche est complètement sortie de l'os, mais la muqueuse gingivale la recouvre. Cette dent n'aura pas une éruption normale, parce que l'espace entre la première prémolaire et la première molaire supérieure gauche est trop restreint. Les deuxième molaires permanentes haut et bas ont déjà commencé leur calcification. Les dents du bas ont une position et une calcification normales. (Fig. 4.)

Discussion du cas: Après ces considérations concernant le patient, les modèles, l'occlusion, la radiographie, nous sommes à même d'exécuter une tentative

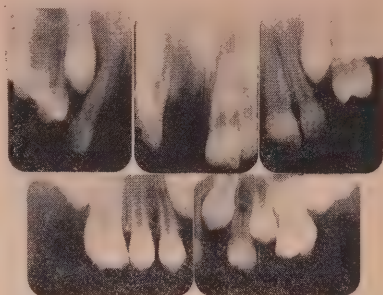


FIG. 4.

La radiographie: Les deux canines ne sont pas encore en éruption. La canine supérieure droite est en position oblique par rapport à la latérale. La deuxième prémolaire gauche n'est pas encore en éruption. On remarque la formation des deux dents de douze ans.

de traitement. Il y a à notre disposition plusieurs types d'appareil de maintien, qui en plus de maintenir l'espace, corrigera l'esthétique, aidera la phonation et remplira jusqu'à un certain point la fonction de la dent remplacée.

Quels sont ces types? Ellis les divise comme suit:

1. Type simple: C'est celui qui consiste en deux bandes d'orthodontie réunies d'un fil soudé.
2. Le pont orthodontique: C'est celui qui consiste en deux bandes d'orthodontie réunies d'un fil soudé et auquel on ajoute une dent postiche.
3. La pièce de prothèse partielle sans crochets: La voute palatine est recouverte d'une plaque en acrylique contournant le collet des dents et possédant une dent postiche.
4. La pièce de prothèse partielle avec crochets: Celle-ci ressemble à la précédente mais en plus elle possède des crochets.

Le premier type est le plus facile et le plus simple mais, dans le cas, il est impossible à cause de la position de la latérale droite. En employant ce type d'appareil, la canine serait gravement en danger. Le pont orthodontique ne donnerait pas de meilleur résultat pour les mêmes raisons. Cependant il pourrait devenir efficace en lui soudant des crochets à ressort. La pièce de prothèse partielle sans crochets ne serait pas suffisante.

Nous avons besoin d'un appareil qui aidera la latérale droite à reprendre sa position normale et ainsi favorisera l'éruption normale de la canine droite. En plus l'appareil doit empêcher la centrale droite de dépasser la ligne médiane.

La dent postiche empêchera la centrale gauche de mésialer et ainsi de dépasser la ligne médiane. Elle servira d'arrêt au mouvement mésial de la latérale donné par un fil à ressort. Ce même appareil empêchera la latérale gauche de distaler, la première prémolaire de mésialer ou distaler et la molaire de mésialer.

Le cas demande un appareil de prothèse partiele construit des éléments suivants:

1. Une voute palatine en plastique.
2. Des crochets.
3. Un fil labial.
4. Une dent postiche.

La voute palatine sera adaptée au collet des dents avec extension en plastique entre la première molaire et la première prémolaire supérieure gauche pour empêcher la molaire de mésialer et la prémolaire de distaler. Une autre extension empêchera la latérale gauche de distaler et la première prémolaire de mésialer. Lorsque la canine gauche et la deuxième prémolaire auront commencé leur éruption, il faudra couper ces extensions. Du côté droit, le plastique sera adapté au collet de la latérale de manière à lui permettre un mouvement mésial, tout en empêchant un mouvement lingual. Une autre pointe d'acrylique s'étendra entre la latérale et la première prémolaire pour empêcher celle-ci de mésialer.

Les crochets construits en fil de chromel, jauge 20, serviront de rétention à la plaque. Leur position sera au collet des prémolaires.

On emploie un fil de chromel, jauge 20, comme fil labial. Lingualement, du côté gauche, le fil s'insère dans le plastique et est retenu en place par un oeillet. Il sort du plastique au niveau de la crête mésio-buccale de cette même dent. Puis il contourne la gencive et remonte jusqu'à quelques millimètre du repli muqueux. Ici on le recourbe sur lui-même en forme de "U". De nouveau,

il descend en contournant la gencive labiale pour venir s'appuyer au tiers moyen du côté disto-labial de la latérale supérieure droite. On le replie à l'angle droit de la ligne médiane. Il touche à la centrale et la latérale gauche sans exercer de pression. Ici on le replie à angle droit. Il contourne la muqueuse gingivale et remonte à quelques millimètres du repli muqueux, puis on le replie en "U". Il contourne la muqueuse gingivale et vient s'appuyer sur la crête mésio-buccale et mésio-linguale de la première bicuspide supérieure gauche, et s'insère de nouveau dans l'acrylique pour se terminer par un oeillet. Ce fil empêchera la centrale et la latérale supérieure gauche de labialer, l'acrylique qui contourne le collet des dents du côté palatin les empêchera de lingualer. Sur ces deux dents, il n'exercera aucune pression, mais sur la latérale supérieure droite, il exercera une force de 2 à 2½ onces. Tout de même la dent ne lingualera pas, parce que du côté mésio-lingual elle est appuyée sur l'acrylique. Son mouvement sera celui d'un pivot. La descente de la canine ne sera pas suffisante pour mésialer la latérale. Il faut un fil d'or platiné, soudé au chromel, capable d'exercer une pression de 2 onces mésialement. Le fil s'appuyera donc distalement à la latérale.

La dent postiche sera de même largeur et de même longueur que la centrale supérieure gauche. De préférence, on choisira une dent en plastique au lieu d'une dent en porcelaine de manière à éviter un trop grand traumatisme. Au début il existera une espace entre la centrale droite et la latérale, mais cet espace sera comblé par la latérale.

Un appareil construit de cette manière représente certains inconvénients. Souvent les enfants, qui ne sont pas encore trop soucieux de leurs dents, ne veulent pas porter un tel appareil à cause de la gêne et de l'embarras du fil labial. Ceci peut avoir un effet psychologique sur l'enfant.

En soudant un fil d'or platiné, jauge 22, au fil de chromel la soudure ramollit le chromel au point soudé.

Un point, auquel nous n'avons pas fait allusion, est celui de reculer la première molaire supérieure gauche. Pour cette

raison, nous ne pouvons employer cet appareil. Il faut donc avoir recours à un autre appareil qui sera composé des éléments suivants:

1. Une dent postiche.
2. Une voute palatine, de préférence en plastique transparent.
3. Des crochets.

Cet appareil diffère du premier seulement pour ce qui concerne les crochets et le fil labial. Il n'y a pas de fil labial. La dent postiche remplit le même rôle que dans l'appareil précédent. Les crochets seront construits en chromel, jauge 20, et en or platiné, jauge 19. Les crochets en chromel serviront de rétention à l'appareil et seront appuyés sur les deux premières prémolaires supérieures. Les crochets en or platiné sont construits de manière spéciale. Le premier s'insère au niveau de la latérale droite supérieure du côté palatin. Le second, au niveau de la première molaire gauche, du côté palatin. Ces deux crochets possèdent les éléments suivants:

1. Or platiné, jauge 19.
2. Or platiné, jauge 22.
3. Soudure en or, 14 carats.

La tige d'or platiné, jauge 19, est prise dans le plastique par les deux bouts; le centre se trouve dégagé du plastique. L'autre tige en or platiné, jauge 22, se trouve soudée à la tige de 19, près du plastique par de la même soudure, 14 carats. A partir de la soudure, la tige de 22 se dirige vers le centre du palais, puis elle est repliée en demi-cercle, revient sur elle-même, fait un tour complet autour de l'or platiné, jauge 19. D'ici, elle se dirige vers le côté buccal pour s'appuyer sur la dent en question.

La tige d'or platiné, jauge 22, est complètement dégagée du plastique. C'est avec ces deux crochets que nous allons obtenir nos résultats. Ce mode de crochet nous permet d'appliquer la force désirée et de la changer à volonté. Une force de deux onces est suffisante pour mésialer la latérale ou distaler la première molaire supérieure gauche. La plaque de plastique s'appuyant sur toute l'étendue de la voute palatine servira de rétention ainsi que les deux crochets en chromel.

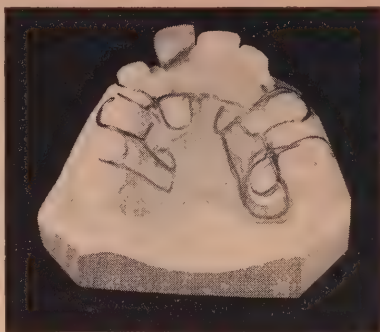


FIG. 5.

L'appareil et modèle, vue palatine. La voute palatine en plastique transparent nous laisse voir la disposition de l'armature. Du côté gauche de la figure, on remarque entre la lière molaire et la deuxième prémolaire un appui entre la deuxième prémolaire et la première prémolaire un crochet en chromel entourant le collet de la première prémolaire, mésialement à la première prémolaire un autre appui qui empêchera cette dent de mésialer. L'espace entre la première prémolaire et la latérale est insuffisante pour permettre l'éruption normale de la canine. Le crochet fonctionnel en or platiné est appuyé sur la latérale. Ce crochet est complètement dégagé du plastique. La dent postiche remplace la permanente. Du côté droit de la figure, on remarque un crochet sur la première prémolaire servant de rétention à l'appareil. Ce crochet empêchera la dent de mésialer. Distalement un appui qui empêchera la dent de mésialer. Mésialement à la première molaire se trouve le crochet fonctionnel qui distallera la molaire. Ce crochet est semblable à celui de la latérale.

Les crochets en or platiné en plus de remplir un rôle de maintien aideront à stabiliser l'appareil en bouche. (Fig. 5)

CONCLUSIONS

Dans les quelques paragraphes précédents, nous avons considéré l'état actuel du patient, sa bouche, ses empreintes, son articulation, la calcification de l'os et des dents, après quoi nous avons tracé un plan de traitement. Maintenant, il nous reste à revoir le patient à intervalles réguliers, afin de contrôler le travail accompli par notre appareil et de prévenir les infractions possibles pendant la période de traitement. Une fois l'appareil en bouche, le travail commence. A chacun des crochets en or platiné, on donnera une force de deux onces pour mésialer la latérale et distaler la première molaire supérieure droite. Cet appareil n'est pas permanent, il peut servir pour une période d'environ 3 ans. Pendant ce laps de temps, les deux canines supérieures et

la deuxième prémolaire supérieure gauche feront leur éruption. L'appareil servira à créer et à maintenir des espaces normaux pour permettre des éruptions et une occlusion normales.

Vers l'âge de seize ans, les dents seront suffisamment calcifiées pour remplacer l'appareil temporaire par une restauration permanente.

BIBLIOGRAPHIE :

GEOFFRION, P. — "Cours — Université de Montréal."

ELLIS—"Injuries to the Teeth of Children", pp. 148-157.

BRAUER—"Dentistry For Children" pp. 194-217.

COLBY, E. H. — "Space Maintainers," J.A.D.A. June 1942, pp. 1025-1030.

CALLAWAY—"Contraindications for Space Maintainers in the Mouth of Children," J.A.D.A. 27: 1091, July 1940.

COHEN, J. T. "Growth and Development of the Dental Arches in Children," J.A.D.A. 27: 1350, August 1940.

McBRIDE, W. C.—"Treatment of Accidents to Anterior Teeth of Young Patients," J.A.D.A. 23: 755, May 1936.

LEPINE, L.—"Prévention des Malocclusions," J.A.D.C. 14: 1948.

Cours post-gradué en Chirurgie et Anesthésie à l'Université de Montréal du 4 au 9 octobre.

Un cours de perfectionnement en Chirurgie et Anesthésie buccales est offert aux dentistes en pratique générale par la faculté de Chirurgie Dentaire de l'Université de Montréal, du 4 au 9 octobre (une semaine complète).



Le docteur Sterling V. Mead

Pour ses cliniques à l'Université de Montréal, le docteur Mead sera assisté par ses aides habituels de Washington, D.C.

Les honoraires de ce cours sont de \$65.00 et le nombre des inscriptions est limité à 30.

Les inscriptions seront closes le 1er septembre.

Pour tous les renseignements, on s'adresse au Doyen, Faculté de Chirurgie Dentaire, Université de Montréal, 2900 Boul. Mont-Royal, Montréal.

Le docteur Sterling V. Mead, chirurgien buccal de réputation internationale, est en charge du cours. Il offrira, durant cette semaine, des conférences et des cliniques propres à intéresser les praticiens. Le docteur Mead est l'auteur des volumes connus, "Diseases of the Mouth", "Oral Surgery" et "Anesthesia in Dentistry". Durant plusieurs années, il fut professeur des maladies de la bouche, de radiographie et directeur des recherches à la Georgetown University Dental School. En 1935, il reçut une médaille de l'International Research Society pour ses travaux sur l'anesthésie en chirurgie buccale.

En 1944, il reçut également la Fones Medal de l'Association Dentaire du Connecticut, en reconnaissance de son oeuvre scientifique.

Le docteur Mead est le président sortant de charge de l'Association Dentaire Américaine.

Dans le monde dentaire

Honneur pour la faculté de Chirurgie Dentaire

Les docteurs Paul Geoffrion, vice-doyen de la faculté et Gustave Gauthier, secrétaire, viennent d'être reçus "fellows" de l'American College of Dentists. Le docteur Gérard de Montigny, professeur agrégé de Chirurgie à la même faculté, vient d'être reçu "fellow" de l'International College of Dentists.

Ces distinctions sont un effet du renom de la faculté de Chirurgie Dentaire de l'Université de Montréal, depuis sa réorganisation.

Résultat du concours de l'A.D.C.

Le concours du Mémorial de Guerre de l'Association Dentaire Canadienne, pour la meilleure thèse soumise par les finissants des facultés dentaires canadiennes, sur le sujet suivant: "Les tendances modernes du contrôle de la carie dentaire" a donné le résultat ci-dessous:

1er: Michael Medora, Université McGill

2e: Vincent Tremblay, Université de Montréal

Le sujet choisi pour l'an prochain est: "L'influence des glandes endocrines sur le développement et la bonne santé de l'appareil buccal".

Changement à l'Université McGill

Le docteur D. P. Mowry, spécialiste en parodontose et professeur titulaire à la faculté dentaire de l'Université McGill de Montréal, vient d'être nommé doyen de cette faculté. Le docteur Mowry succède au docteur A. L. Walsh, démissionnaire.

Nécrologie

Le docteur Georges H. Kent est décédé, le 14 juin 1948, à l'âge de 72 ans. La nouvelle de sa mort a été accueillie chez ses confrères avec une profonde émotion.

Sa carrière, extrêmement active et féconde, ne lui avait attiré que des amis. En lui, disparaît un des dentistes les plus éminents de la province et de l'Université de Montréal. Il avait aidé à former plusieurs générations de jeunes, pendant ses quelques vingt ans de professorat à la Faculté de Chirurgie Dentaire. Sa science et son esprit lucide lui permettaient d'être clair et de rendre les cours les plus abstraits, intéressants.

Il avait fait ses études au Collège Bourget à Rigaud et avait été admis à la pratique de la chirurgie dentaire, en mai 1897. Sa personnalité lui valut d'être élu gouverneur du Bureau des Chirurgiens-Dentistes de la province de Québec, d'être choisi président du deuxième congrès des dentistes de langue française du Québec, en mai 1934. A sa démission comme professeur, le conseil de la Faculté de Chirurgie Dentaire le nomma professeur honoraire et l'Université de Montréal lui décerna le titre de docteur en chirurgie dentaire "honoris causa".

Le gouvernement de la province, en 1922, lui fit organiser les cliniques dentaires de l'hôpital Saint-Jean-de-Dieu et de l'hôpital protestant de Verdun; il quitta Saint-Jean-de-Dieu en 1927 pour rester attaché jusqu'à sa mort à l'hôpital de Verdun.

Lui survit son épouse, née Calista Martin, un fils, Jean Léonard; deux filles, madame William Espinoza (Madeleine) et madame Antonio Cantero (Fernande); deux soeurs et trois frères dont Ernest, dentiste à Sainte-Anne-de-Bellevue.

Nos condoléances à sa famille.

PAUL-E. POITRAS.





PAGES EDITORIALES

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Rédacteur:

GERARD DE MONTIGNY, B.A., D.D.S., M.Sc.D., L.C.D.

397 est Boul. S.-Joseph, Montréal

Impressions du congrès de la Malbaie

Le 3e Congrès de l'Association Dentaire Canadienne, qui s'est déroulé à Murray Bay, à la fin de juin, laissera dans la mémoire des dentistes, qui y ont assisté, des souvenirs inoubliables. Tous reconnaîtront la prévoyance des organisateurs pour tous les détails de ces quatre journées, qui groupaient environ 350 confrères de toutes les régions du Canada. Le programme scientifique était des mieux choisis et répondait aux exigences de tous les domaines de la dentisterie. Prothèse complète, prothèse partielle, couronnes et ponts, endodontie, dentisterie opératoire, orthodontie, chirurgie et anesthésie, tous les aspects de notre pratique furent traités par des conférenciers et des cliniciens de marque. Tous les dentistes, inscrits à cette réunion, ont tiré un profit personnel, dans leur sphère respective, par la nouveauté des exposés et l'expérience des orateurs.

De superbes films scientifiques furent montrés aux congressistes et des cliniques de table, nombreuses et variées, illustraient d'une façon pratique des tours de main ou des trucs précieux du métier.

Le programme des loisirs a été élaboré d'une manière charmante et en accord avec les facilités extérieures du Manoir Richelieu. Concours sportifs (golf, putting, tennis, nage), film cinématographique, danse, cocktail, (offert par le Collège des Chirurgiens-Dentistes de la Province de Québec), concert splendide, avec comme artiste invité, Raoul Jobin, (offert par la Société de Stomatologie de Québec), voyage dans la rivière Saguenay, tous ces à-côtés sociaux ont plu énormément à tous les congressistes et leurs épouses. Le docteur Gustave Ratté, de Québec, et ses assistants ont droit aux félicitations et aux remerciements de tous leurs confrères pour avoir mis en oeuvre tout leur savoir-faire et leur énergie à l'organisation impeccable de ce congrès, qui est tout à l'honneur du groupement professionnel canadien-français.

La réunion du Bureau des Gouverneurs de l'A.D.C., constitué par les

délégués des provinces du pays, qui précédait de 4 jours le Congrès, fournit à notre Association l'occasion de définir sa politique sur plusieurs questions intéressant toute la profession. Il serait trop long d'énumérer tout le travail accompli au cours de ces assises; c'est un sujet sur lequel nous aurons l'occasion de revenir.

Mentionnons l'effort immense apporté à la réglementation uniforme des cours d'études dentaires dans les universités canadiennes, par le Conseil d'Education Dentaire.

Soulignons les réalisations du Comité des Services Dentaires dans les Hôpitaux, qui a formulé d'une façon précise un plan-type de service dentaire, susceptible d'être adopté dans tous les hôpitaux du pays.

Enfin nous aimerions appuyer sur la bonne besogne accomplie par le Comité d'Assurance-Santé sur le problème de l'étatisation ou de la socialisation des professions, qui s'occupent de la santé des populations.

Ces assises, où ont été discutés en détail les problèmes de la profession dentaire canadienne, ont été des plus constructives et le secrétaire-général de notre Association, le Dr Don W. Gullett, doit être félicité pour l'excellent travail, qui s'y est fait. En terminant, mentionnons que le Docteur Gullett a été délégué par l'Association en Angleterre pour étudier sur place, en juillet, cette nouvelle loi, qui régit les professions médicale et dentaire, dans ce pays.

GERARD DE MONTIGNY.



Réunion du Bureau des Gouverneurs de l'A.D.C., à Murray Bay

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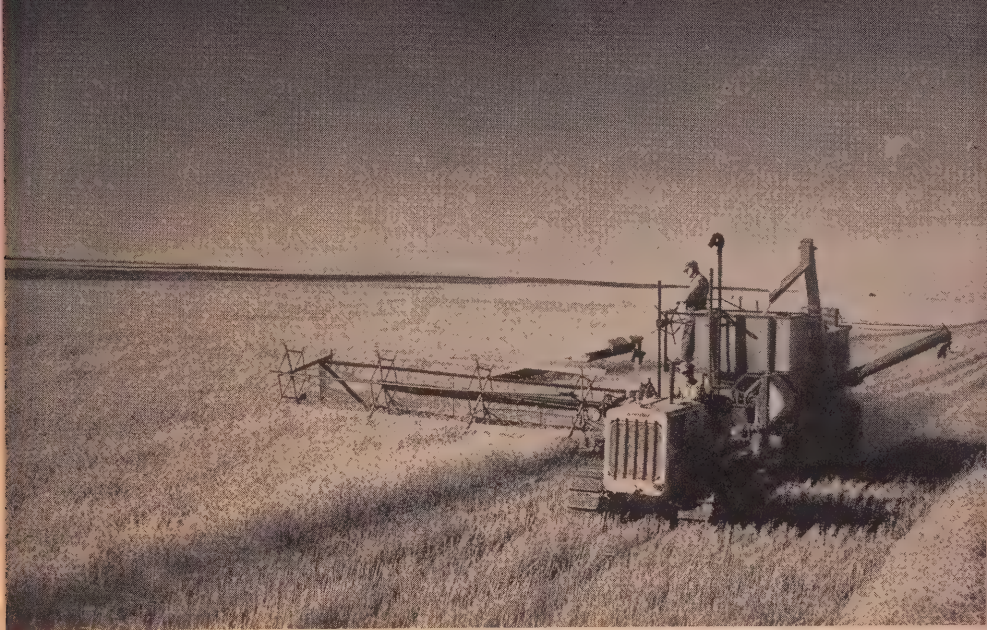


Photo courtesy of Bureau of Publications, Regina, Saskatchewan

HARVEST SCENE IN SASKATCHEWAN

I thank Thee, Lord, for every moment dropped
Into my life that had some sweetness in it,
For all the golden hours when friendship met
And gave up heart for heart and thought for thought,
For all the love that faithful hearts let fall,
To drop into mine own; for every look
From loving eyes; for every smile or word
That gladdened me; for subtle influence
That made me strong, dear Lord, I thank Thee.

—R. H. Pastor.





DR. J. H. JOHNSON, Toronto, Ontario
President, Academy of Dentistry, Toronto.

Professor of Dental Surgery and Anaesthesia,
Faculty of Dentistry, University of Toronto.

Librarian, Faculty of Dentistry and Harry R. Abbott
Memorial Library.

Associate Editor, Journal of Oral Surgery.

Associate, American Society of Anaesthesiologists.

Member of Senate, University of Toronto.

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THE FUTURE OF DENTISTRY AS A HEALTH SERVICE*

by HAROLD HILLENBRAND, D.D.S., Chicago, Illinois

EVERY AGE lays claim to a unique place in history: some with justice, others with complacency. But a survey of the endless decades of history reveals with clarity that no generation other than this one has had to plan for survival under the awful influence of the formula discovered by Einstein: $E = mc^2$. This formula tells the story, cryptically perhaps, of the atomic bomb, of Hiroshima and Bikini, of wars and scientific progress yet to come. This generation, then, can with justice, lay claim to be participating in a unique period of history.

Even though other generations have felt themselves to be in a similarly unique relation to history, none has had behind it the urgency for constructive thought and planning that came with the revelation of the secret of the atom. R. H. Tawney, the British philosopher, felt that his generation held a unique place in history for he wrote, in 1920, when Europe lay devastated after the first world war, of the need for planned action, a need which is multiplied many times today.

"There are times which are not ordinary, and in such times it is not enough to follow the road. It is necessary to know where it leads, and, if it leads nowhere, to follow another. The search for another involves reflection, which is ungenial to the bustling people who describe themselves as practical, be-

cause they take things as they are and leave them as they are. But the practical thing for a traveller who is uncertain of his path is not to proceed with the utmost rapidity in the wrong direction; it is to consider how to find the right one. And the practical thing for a nation which has stumbled upon one of the turning points of history is not to behave as though nothing very important were involved, as if it did not matter whether it turned right or left, went up hill or down dale, provided that it continued, doing with a little more energy what it has done hitherto; but to consider if what it has done is wise, and, if it is not wise, to alter it.

"Unless (a nation) is to move with the energetic futility of a squirrel in a revolving cage, it must have a clear apprehension both of the deficiency of what is, and the character of what ought to be. And to obtain this apprehension it must appeal to some standard more stable than the momentary exigencies of its commerce or industry or social life, and judge them by it. It must, in short, have recourse to principles."¹

There is a real danger that a nation, or a society or a profession will ignore its debt to its generation and to history. This danger can be founded on an ignorance of the issues of the day, or on an indifference to them and their importance. Whatever the reason, the results to a nation, to a society or to a profession are serious. Fackenthal, in a recent address to the grad-

* Presented at the National Convention of Canadian Dentists, Manoir Richelieu, Pointe-aux-Pic, Quebec, June 23, 1948.

uates of Columbia University, sounded a clear warning:

"Science makes giant strides forward because the scientists have the intelligence to base their experiments on the proven ground of the past. They weigh the accumulated theories, both true and false, and discard those lines of attack known to be unrewarding. So will human relationships most surely be aided in their advance if guided by man's experiments in living, which in the course of time become history. Over and over again, in these experiments in living, man finds recurring the same lines of false reasoning, the same selfish insistence upon ends profitable only for the moment, the same persistent misrepresentation of truth, which have always led to war, to disaster, to destruction of civilizations. And yet with bland indifference he has ignored these lessons of history; he has always said to himself: 'But that was long ago in another country . . .'"²

DENTISTRY AS A PROFESSION

If dentistry is to fulfil its future as an authentic health service, the members of that profession must have—in addition to awareness and principles—some notion of what a profession is, how its objectives and ideals must be related to society. Here again Tawney has something of importance to tell us:

"A profession is defined most simply as a trade which is organized, incompletely no doubt, but genuinely, for the performance of function. It is not simply a collection of individuals who get a living for themselves by the same kind of work. Nor is it merely a group which is organized exclusively for the economic protection of its members, though that is normally among its purposes. It is a body of men who carry on their work in accordance with rules designed to enforce certain standards both for the better protection of its members and for the better service of the public . . .

"The difference between industry as it exists today and a profession is, then, simple and unmistakable. The essence of the former is that its only criterion is the financial return which it offers to its shareholders. The essence of the latter, is that, though men enter it for the sake of livelihood, the measure of their success is the service which they per-

form, not the gains which they amass. They may, as in the case of a successful doctor, grow rich; but the meaning of their profession, both for themselves and for the public, is not that they make money but that they make health, or safety, or knowledge, or good government or good law."³

WORLD HEALTH ORGANIZATION

Dentistry, then, if it is a profession, must make health and, if it is to make health on a scale larger than ever before, it must have a clear picture of what the problems are and of the best means available for solution. Some of this planning can be made and has been made, on an international scale. But too many nations still hold to the fallacy that disease in some mysterious way will recognize their national borders; that there is no pressing need for an effective international agency to safeguard and improve health. Canada very quickly recognized this necessity and early took part in the World Health Organization, the agency of the United Nations devoted to the problems of international health. The United States unfortunately, has not yet adhered fully to the conventions of the World Health Organization but it is to be hoped that it will do so in the near future. The World Health Organization can be an integral part of the effort toward planning, on a constructive program, for improved health in all countries of the world. Its influence and program should be expanded with all possible speed. A meeting of the Ad Interim Commission is being held in Geneva, Switzerland, coincidental with this meeting. Because of organizational and procedural difficulties which, indeed, seem to be the hallmark of the United Nations in its efforts to organize the peace, the World Health Organization has granted little recognition to dentistry in its program for improved health. It is the duty of dentists everywhere to bring this lack to the attention of their national representatives on the World Health Organization. Health can not be the totality it must eventually be, unless it includes dental health.

FEDERATION DENTAIRE INTERNATIONALE

Dentistry has not ignored its international obligations. Through the efforts of Godon, Kirk, Villain and others the *Fédération Dentaire Internationale* was founded at the turn of the century. Two world wars have taken their toll of this organization, but it is now reconstructing its program with new vigour. Perhaps the affiliation of this agency with the World Health Organization offers a strengthened approach to the problems of improved dental health on an international scale. Certainly, it is an avenue which must be explored fully by all of those who believe that improved health can contribute materially to the progress and peace of all nations.

Pending the day when there will be real progress and agreement on an international dental program, the countries of the world should not halt their own planning. Sound national programs for dental health should be devised and, out of the multiplication of these, will come on some distant day a worldwide program.

I am going to discuss with you briefly, the national dental program which was proposed recently for the United States. This is not to say that I will discuss it because it is the best program or the most desirable one. I will discuss it because it is the one with which I am most familiar and out of such discussion may come the point I wish to make: that planning for dental health is unequivocally essential so that we may take advantage of our unique position in history and so that we can justify our continued existence as a health profession whose main duty is to society.

NATIONAL HEALTH ASSEMBLY

About two months ago, at the call of the President of the United States, there was held in Washington the first National Health Assembly. The Assembly was composed of more than eight hundred persons—educators, professional people, consumers—who were influential in the design of health programs. Their assignment was to de-

sign a ten year program for health in the United States. One section was devoted to dental health. The recommendations of this body come so close to representing the dental opinion in the United States and so close to being the only formalized expression of dental health objectives, that I take the liberty of summarizing the recommendations of the dental section here.

GOALS FOR DENTAL HEALTH

Any program must have an objective, and the objectives for a ten year program in dental health were set down by the National Health Assembly as follows:

1. Prevention of dental disease through the application of effective preventive techniques;
2. Control of dental diseases by making dental treatment and dental health education available to every child as rapidly as resources permit;
3. Increased facilities for dental care in all hospitals and health centres;
4. Improved distribution of dentists between urban and rural areas and an increase in the number of qualified dental practitioners in the nation;
5. Training and utilization of additional auxiliary personnel—dental hygienists, dental assistants and dental technicians.”⁴

I dare say that these objectives might well be the goal of any national dental program, but certainly they can provide the basis for discussion everywhere.

DENTAL RESEARCH

Dental research must be the basis of any long-range, constructive dental health program. Until new knowledge lights the way to new methods, dentistry must use the make-shift methods of the present for the prevention and control of dental diseases. By no means does this imply that dental research has not made great progress in past decades, for it has. But it is common and deplorable knowledge, that society has never discharged its obligation to dental research. In the United States, for example, only a

small fraction of one per cent of available federal funds is presently devoted to the problems of dental disease. In the United States also, a recent survey indicates that the following sums, per case, are being derived from voluntary agencies:⁵

	Per Case
175,000 cases of poliomyelitis	\$94.00
681,000 cases of tuberculosis	22.00
500,000 cases of cancer	8.00
426,000 deaths from heart disease . . .	.03

For dental diseases, which have universal incidence, less than a fraction of one per cent is being derived from the funds of voluntary agencies.

It is no wonder, then, that the National Health Assembly felt called upon to make the following strong recommendations for the improvement of dental research:

"The federal government should immediately make provision for expanded research in the field of dental health. The federal government should also make funds available for administrative research to plan and conduct studies and experimental programs in selected communities to evaluate various types of dental care programs for such groups as school children, the indigent, low income groups and residents of rural areas. Such program should include various types of voluntary prepayment plans, part payment programs, preventive care programs and the development of various methods for providing dental care to children on different economic levels. A commission should be created to define standards for dental health care more explicitly."⁶

Some progress has already been made toward the achievement of this goal in the United States. Some time ago, the Congress of the United States approved a dental research bill, sponsored by the American Dental Association, which appropriates 2 million dollars for the erection and maintenance of a National Institute of Dental Research as a part of the National Institute of Health near Washington, D.C. The bill also provided for grants-in-aid to public and private individuals and agencies, in the amount of \$750,000 for the furtherance of dental research. The bill now awaits the signature of President Truman and, when it is ap-

proved to the bill, dentistry for the first time in the United States will be matching strides in research with cancer, tuberculosis, the degenerative diseases and the mental diseases.

The Congress of the United States has also authorized in the past month the appropriation of one million dollars to demonstrate the control of dental caries through the topical application of the fluorides. Each state, through demonstration units organized in conjunction with state health departments, will have a program to popularize the preventive effects of the topical applications and to discover more effective means of applying this agent.

This is but a small program but it does indicate, in some measure, an attempt to meet the need for going ahead in time of unique, historical stress.

DENTAL HEALTH EDUCATION

As new research proceeds on its methodical and comprehensive investigation of dental problems, every effort must be made to bring to the public a renewed consciousness of the means that are already available for the prevention and control of dental diseases. Such an effort requires dental health education which, as an isolated, independent objective, is sterile. Too much dental health education has been wasted and unproductive because it has too often been considered as an end in itself, rather than as a means to an end. Our knowledge of techniques in dental health education is meagre; our application of known techniques, equally scanty. Dental health education must be revived; it must be made the responsibility of more than the dental profession by making it the responsibility of all society; it must be integrated with the program for research and for dental care. With these objectives in mind, the National Health Assembly recommended:

"Further experimentation on the part of all agencies in the techniques of dental health education . . . so that authoritative dental health facts can be selected and interpreted in understandable terms for all levels

of society. Additional courses in dental health education should be provided in all institutions which train personnel for the fields of health and education.”⁷

This need for dental health education is urgent. In the United States, where we have prided ourselves on the level of dental health education, much remains to be done in even such elementary things as brushing the teeth.

McCauley has shown that, in 1944, 185 million toothbrushes were shipped from U.S. factories. Of this number, 43 per cent (79,000,000) were distributed to military and export agencies. Only 106 million brushes remained for domestic consumption.

“Since approximately 220 million (toothbrushes) would be required to supply with two brushes yearly each person who is more than 2 years and less than 60 years of age in the United States, it is evident that, even in the flush of wartime prosperity, the majority of (residents of the United States) do not use toothbrushes.”⁸

These figures indicate the work that still must be done through dental health education. The motivation of the population to provide for its own dental needs on a personal or family basis will do much to reduce the prevalence of dental diseases and remains one of the great tasks of the profession.

DENTAL HEALTH SERVICES

Both dental research and dental health education become more effective weapons when implemented with a comprehensive dental service that is available to all people regardless of income or geographic location. On the basis of that principle, the National Health Assembly recommended the following program:

“The dental profession should utilize to the fullest extent the following measures of prevention and control together with such extensions as advancing dental science may reveal:

1. Routine prophylaxis and examinations;
2. Topical application of sodium fluoride;
3. Utilization of diagnostic aids, such as lactobacillus tests;

4. Completion of all indicated dental treatment;
5. Full utilization of preventive orthodontics;
6. Development of programs to combat environmental hazards associated with occupations.”⁹

DENTAL PERSONNEL

If this program could be put into action at once, there is no question but that a great impact would be made upon the problems of dental need. But, realistically, the amount of dental care that can be provided at any one moment is limited to the amount of service that can be rendered by licensed dentists and, to a more limited extent, by licensed dental hygienists and nurses. This fact cuts directly to the heart of the problem of more dental care: the overall shortage of dental personnel available for the immense tasks of rehabilitation and prevention that lie before the dental profession. This shortage is complicated, additionally, by a perverse distribution of personnel between metropolitan and rural areas.

There are no easy answers in the solution of this complicated problem, for many factors are involved. At the moment, the American Association of Dental Schools—which represents a wholesome linking of the interests of the dental professions in Canada and in the United States—is engaged in a discussion of these problems at its annual session in Buffalo, New York. A distinguished member of your Association, Dean Arnold D. Mason, is president of the school's association and his contributions, through the years, have been many and sustained. Deans Ernest Charron, W. Scott Hamilton and others are also providing splendid leadership in the problems of dental education. This is the type of cooperation which leads to the adoption of common objectives and, so far as possible, of common standards.

Such cooperation, broad and generous as it has been in the past, should be extended in the future. I am informed that the mutual recognition of properly qualified dental schools, within the limits of citizenship and other

qualifying statutes, has not yet been fully attained by Canada and the United States. The Council on Dental Education of the Canadian Dental Association and the Council on Dental Education of the American Dental Association are now discussing the issues involved. In my opinion, it would be a salutary sign of dental progress and of international cooperation if all of the Canadian dental schools could be recognized by the United States and if Canada could recognize all of the accredited schools in the United States. I am sure that such a program is not very far from actual achievement. The program, of course, when designed must fall fully within the statutes of the two countries and must be on a basis of equitable reciprocity.

This problem of the recognition of qualified schools involves another matter which is of growing importance to the dental profession: the creation and maintenance of boards for the certification of specialists. The Council on Dental Education of the American Dental Association is presently concerned with the approval of specialty boards in five fields: oral surgery, orthodontics, periodontia, pedodontia and prosthodontia. One of the common requirements of these boards is that the candidate be a graduate of a "recognized" dental school. The reciprocal recognition of dental schools, then, by the United States and Canada will also permit new progress in the organization and standardization of specialty boards, and, as well, will permit the development of greater solidarity between the professions of the two countries.

In the United States, at the present time, two ventures are being undertaken which may have a considerable impact on dental education. As a result of the war period, the dental schools have been crowded with applications. In 1947, a total of seventeen thousand applications were received for the available 3,000 places in the 40 dental schools of the United States. This means that about 14,000 applications were rejected. This also means

that 3,000 students per year represent very nearly the present maximum capacity of all the schools unless there is an increase in facilities or an increase in the number of schools. At the present, five states are contemplating the establishment of new dental schools. But even with this potential increase, there are immediate problems to be solved. One of the greatest of these is to select from this host of applications, the best qualified students each year. The American Dental Association has embarked on a five-year experiment through which it is hoped to establish a series of aptitude tests which will have particular applicability to the selection of dental students. These tests are now being given in all of the schools of the United States. Exhaustive records are kept for each student so that his record in these tests can be matched against his actual achievement. When this program is completed, the profession of dentistry will have an invaluable measure against which the qualification of a candidate for the study of dentistry can be matched. This will serve to conserve the limited number of places in dental schools for those whose skills and aptitude are shown to be of the highest quality.

The federal government in the United States is also starting on a program which may have eventual significance for all of the health professions. Grants of money are being made to the states for use in providing scholarships for medical and dental students. This is a sound attack on the problem of getting representatives of all income groups into the profession, but it will not do much to rectify the present basic difficulty; an excess of applicants and a shortage of school facilities.

The problem of auxiliary dental personnel is getting increasing attention in the United States. Dental hygienists are now licensed in 40 of the 48 states and in the District of Columbia. There are no licensing provisions for dental assistants. The shortage in both fields is very great.

Of considerably more topical importance, is the question of dental laboratories and technicians. Because of federal educational aid to veterans, about five times as many technicians as can be absorbed annually are being trained in the United States at the present time. This oversupply can eventually produce a severe problem in the illegal practice of dentistry. Many remedies are being discussed, and a few are being tried. The American Dental Association has initiated a program for the accreditation of dental laboratories, but as yet it has not had widespread acceptance among the states. Several types of legislation have been introduced for the regulation of both dental laboratories and technicians. This legislation requires variously the registration of laboratories, the licensing of technicians or both. The experiments being carried on in Canada in this field are being watched with considerable interest from the other side of the border. At the moment, however, the best that can be said of this problem in the United States is that it is being examined and a solution is being sought.

The problems of dental personnel are related, then, to dental education. The problems of dental education are related to the increased recognition by society of the services that dentistry can render as a health profession. This recognition must take its form partially in increased material support for all dental schools. The dental schools of Canada and the United States have done a superb job under the most limiting of circumstances, but these efforts must now be renewed and increased with additional support from society at large. Unless this is done, dentistry will not have achieved its full stature as a health profession which is rendering an essential health service to all of the people.

But even increased material support will not be the final answer, if the profession permits itself to lose sight of higher objectives. Horner, in his "Dental Education Today," has this significant statement to make:

"American dental schools (and he does not use the term "American dental schools" in any singular sense) have clearly won world leadership. They have won that leadership primarily because of the premium they have put upon fine craftsmanship. If they are to retain that leadership down through the coming years, they must materially broaden the base of their objectives, as many are happily already doing, and train scientists as well as craftsmen, men as well as dentists. This changed outlook does not entail less emphasis, though possibly less time, upon mechanical dexterity; but it does mean more emphasis—vastly more—upon the preservation of health, the prevention of disease, and the recognition of dentistry, though separately organized and administered, as a worthy inherent unit of the healing art."¹¹

And there, in different words, perhaps, you have the essence of what Tawney said about professions more than a generation ago. The encouraging thing is that the world of dentistry today bustles with activity on many fronts: in research, in dental health education, in the wider provision of dental services, in dental education and in dental organization. Your great Canadian Dental Association, with its enterprise and its vigorous leadership will make a contribution to this country that well might be matched in every corner of the world. Dr. J. K. Carver, your president, your indefatigable Dr. Don W. Gullett, Dr. Gustav Ratté, who has conducted such a splendid meeting in such a superb setting, Dr. Philippe Hamel, who devised the scientific program for this session, Dr. M. H. Garvin and Dr. T. R. Marshall, the editor and assistant editor of your influential *Journal*—all of these men have contributed greatly to your status and progress as a professional organization. The reinforcement of this progress by every possible individual and collective resource will stake out the limits of the dental profession of the future. In this task all dentists—regardless of where they live—have an essential part. The future of dentistry—as a health service—depends on how quickly the dental profession

everywhere marches beyond the restraining boundaries of the present; how devotedly it adheres to the mission and ideals of a profession; how well it learns to employ the techniques of an atomic age in increasing and improving its service to the public; how steadfastly it holds to the notion that the present generation has its duty to the next and to history. And no one has stated this more succinctly than did Ruskin:

"When we build, let us think that we build forever. Let it not be for present delight, nor for present use alone.

"Let it be such work that our descendants shall thank us for, and let us think as we lay stone on stone that a time is to come when those

stones shall be held sacred because our hands have touched them.

"And men shall say as they look on the labour and wrought substance of them, 'See, this our fathers did!'"

REFERENCES

1. Tawney, R. H. *The Acquisitive Society*, New York. Harcourt, Brace & Co., N.D.
2. Fackenthal, F. D. *The Structure of Freedom*. An address delivered at the 1948 commencement of Columbia University, New York. Columbia University.
3. Tawney, R. H. op. cit. p. 23-24.
4. National Health Assembly, J.A.D.A. 36:508, June 1, 1948.
5. Time, the Weekly Newsmagazine, November, 1946.
6. J.A.D.A. 36:509, June 1, 1948. op. cit.
7. Idem. 36:509, June 1, 1948.
8. McCauley, H. B. *Toothbrushes, Toothbrush Materials and Design*. J.A.D.A. 33:283, March 1, 1946.
9. J.A.D.A. 36:509, June 1, 1948. op. cit.
10. Horner, H. H. *Dental Education Today*, Chicago. The University of Chicago Press. 1947. P. 319.

ANNOUNCEMENTS

Montreal Fall Clinic

The 24th Annual Fall Clinic under the auspices of the Montreal Dental Club will be held at the Mount Royal Hotel, October 27-29, 1948.

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Medicine does not believe that the training it gives its students is sufficient to prepare research workers so why should it be sufficient for dentistry? While the courses in the basic science subjects are usually presented to medical students more thoroughly than to dental students still the best that can be said of them is that they are essentially survey courses. Who believes for example, that courses given to medical students in physiology produce a physiologist or the courses offered in pathology produce pathologists? Men of authority in these subjects are produced only by years of training in these fields and it takes this type of training to be able to think constructively in these areas.—Dean W. H. Crawford, School of Dentistry, Univ. of Minn. at Conference of State Soc. Officers.

"Co-operation would solve most of our problems. For instance, freckles would be a nice coat of tan if they would get together."

THE DENTAL HYGIENIST IN THE UNITED STATES AND ABROAD

by FRANCES A. STOLL, R.D.H., M.A.,* New York, N.Y.

DENTAL HYGIENE as a part of the practice of dentistry was first advocated in 1871 by Dr. A. Arthur of Baltimore, Maryland, but the movement did not gain favour until the late eighties when considerable interest was developing. The term dental hygiene was applied mostly to the necessity for effort on the part of the public to maintain clean mouths. The Southern part of the United States was especially active in this matter of public education and in 1887 the Alabama Dental Association advocated a public lecturer in dental hygiene.

In the early nineties much was written on various phases of this subject, but it remained for Dr. D. D. Smith of Philadelphia, Pennsylvania, with his forceful and convincing arguments and demonstrations to thoroughly impress the dental profession with the importance of the clean mouth.¹

When the dental profession stressed mouth hygiene as an important phase of dental care, dentists realized that the task of properly caring for the population in the cleaning of teeth at regular intervals was an overwhelming task, not to mention the work to be done in educating the general public in the proper care of the mouth. Dr. Fones of Bridgeport, Connecticut, advocated the assistance of women, especially trained under dentists, as a solution to the problem. Out of this idea the first school for training the dental hygienist was established in the United States. Since that time there has been a nation-wide development of this vocation, with the dental hygienist recognized by state examinations and registration in forty-one states, the District of Columbia, Hawaii, and Puerto Rico. Registration and license has thus far been confined to women.

The dental hygienist is primarily an educator who uses the dental prophylaxis, defined as the scaling and polishing of the teeth, as a means to instil in the minds of the patients the importance of home care of the mouth and the desirability of early and regular dental care. Health authorities agree that proper mouth hygiene is essential for good health and physical well-being of the individual. At first, the dental hygienist was employed in dental offices, serving the dentist as the trained nurse serves the physician, in addition to her special services to the patient.

Later her value was found to extend beyond the individual dental office and she was placed in the public schools as a special teacher. During the past twenty years it has been recognized that the control of dental caries must begin early in the life of the individual. Attempts to solve the problems have been made through education in the public schools. Many programs have been instituted to provide school children and their parents with dental health education. The programs which employ dental hygienists as special teachers have shown remarkable results in deciduous and permanent teeth saved by early dental care and good mouth hygiene established on a school-wide basis. The fact that these programs tend to be continued over a period of years indicates their success as a part of the school health program. There is a constant, steady increase in the number of dental hygienists employed in teaching positions in the schools, departments of health and other health agencies. Industry was the next field opened to the dental hygienist. Employers realized that the efficiency of employees was hampered

*Director of Courses for Dental Hygienists, School of Dental and Oral Surgery, Columbia University, New York. Chairman, Committee for the Education and Licensure of Dental Hygienists; President-elect, American Dental Hygienists' Association.

to an alarming degree by poor dental health. Many large industries have established dental departments under the supervision of full-time dentists. Here the dental hygienists serve the employees through dental prophylaxis, instruction in tooth brushing and dental health education; constantly supervised by the attending dentist.

In the United States in order to practise, the dental hygienist must graduate from an accepted school; pass board examinations, and hold a license to practise in the state in which she is employed. In all types of positions she must work under the supervision of a licensed dentist. She is known as a registered dental hygienist and may use the initials R.D.H. after her name. She can operate only in states which recognize her by legislation. The services she may perform for the patient are stated specifically in the statutes of each state. The exact wording varies from state to state, but the accepted meaning is that the dental hygienists may remove calcareous deposits, accretions, and stains from the surfaces of the teeth, and may prescribe or apply ordinary mouth washes of a soothing character, but may not perform any other operations on the teeth, mouth or tissues of the oral cavity.²

The widespread interest in the dental hygienist has prompted the American Dental Association through the Council on Dental Education to set up requirements for the accrediting of schools for the training of hygienists. These requirements, which were approved by the House of Delegates at the Boston meeting in 1947, provide for a two-year course based upon high school graduation or the equivalent for admission. The Council's requirements permit the accrediting of schools conducted on a non-profit basis by responsible educational agencies.³ This standard of accreditation does not meet with the approval of the American Dental Hygienists' Association, which is the official organization of Dental Hygienists in the United States.

This organization is on record advo-

cating that dental hygienists be educated only in accredited dental schools in order that a satisfactory level of education may be maintained under the direct supervision of dental education. In 1946 the estimated number of Dental Hygienists in United States was 4,335.⁴

THE DENTAL HYGIENIST IN COUNTRIES OUTSIDE THE U.S.A.

The first recorded attempt to introduce the dental hygienist in countries outside of the United States was in 1921, when Miss Anna Sigmond, R.D.H. a graduate of Columbia University, Courses for Dental Hygienists, was invited to give a series of clinics and lectures to groups of dentists in Norway, Sweden and Denmark. As a native Norwegian, Miss Anna Sigmond returned to Norway in 1924 to start the first course for dental hygienists in that country. There were twelve students in the class. The course was given only one year and was discontinued because the depression had already set in, especially in the Scandinavian countries. For her efforts in this project, Miss Sigmond was decorated by King Haakon VII with the Service Medal. She was called to Norway under the auspices of the Oral Hygiene Committee of that country, but was paid by the State of Norway. She returned to the United States in 1925 and is still in active service as a dental hygienist.

Through correspondence with her former students in Norway it has been established that some of the original group are still practising.

On June 8, 1948 Dr. Trygve Gythfeldt, M.D., D.D.S., Director of the School Dental Health Program in Oslo, Norway, during a visit with the writer, explained the present status of the dental hygienist in that country⁵. There are seven trained hygienists working in the schools of Oslo. Their duties are to inspect and clean the teeth of school children from seven to fifteen years of age. They prepare the list of those children who are in need

of dental treatment. They are permitted to indicate for the school dentist the number of teeth and the exact location of carious teeth in need of treatment. They record and compile statistics on the dental status of the school children of Oslo. They spend a large part of their time in instructing children and parents in the proper home care of the mouth, the teeth and the toothbrush. The children pay a small fee per year.

Dr. Gythfeldt feels that the dental school in Oslo will train more dental hygienists if the need for them in the schools is indicated. At a recent survey, the various school systems indicated that there would be a need for about eight or ten such trained people. This was not deemed sufficient to provide a course in the dental school. Women with an educational background equal to the college level are sought. When courses have been given for dental hygienists in Norway they have been free and in some instances have carried a stipend of from 50 to 100 Kroner a month during the training period.

From another source we learn that in addition to the school clinics that one hygienist works in a municipal institution which takes care of the teeth of pregnant women. This institution is the only health centre caring for mother and child, which takes care of the mother's teeth during pregnancy. Some others are planned but there is a great shortage of dentists and hygienists. There is only one hygienist working in a private dental office and she works for six dentists.

In Norway dental hygienists are not licensed by law but have a professional organization called "Den Norske Tannpleierskeforening."

There is still a fear, which exists in all the Scandinavian countries that dental hygienists, if allowed to practise in private dental offices, will overstep their duties and enter into the illegal practice of dentistry. This attitude as well as a lack of the understanding of the function of the dental

hygienist in dentistry has prevented the widespread acceptance of her services. There has been no problem of malpractice in United States as dental hygienists are controlled and protected by state laws.

This attitude was particularly strong in Sweden. In 1946 the author, traveling on a fellowship for the purpose of studying the health service programs of these countries, found that excellent courses were given for dental nurses, but these trained women are not permitted to do any work upon the patient and function only as dental assistants in offices, clinics and institutions. Their training is so good that it would take only the added step and a slight change in the curriculum to prepare these young women to do the work of the licensed dental hygienists. Part of the opposition comes from the fact that sixty percent of the students in the Scandinavian dental schools are women and it is felt that a third type of trained women in dentistry would cause, "dilution" of the profession. However, it has become obvious if the programs of dental care outlined in these countries are to be put into full effect, there is need for definite aid to the dentist in preparing the patients by prophylaxis, dental health education and follow-up procedures.

Bodil Torbell, a graduate dentist of the Danish dental school, and graduate dental hygienist of Columbia University returned to her country following World War II and is including in the school clinic in Aalykkegaard, Denmark the American concept of good mouth hygiene and dental health education. Her efforts to establish the dental hygienist as auxiliary personnel to the school clinics of Denmark may encourage the establishment of a training course.

There is evidence that a number of Scandinavian dentists who have studied in America in the last two years, are impressed with the excellence of training and the contribution to better dental health made by the dental hygien-

ists in the United States. They would like to have these services in their offices and by their efforts, it is probably that the demand for training dental hygienists will grow.

American aid to France, through the efforts of J. Foure, D.D.S. has sponsored a dental hygienist to demonstrate the dental health education and service program for children, as established in the United States. Miss Jacqueline Huot, R.D.H. Columbia University graduate and a native of Canada speaks French fluently and has won enthusiastic acceptance of her work and lectures. She is carrying out a dental health education program in the schools of Coutances, Manche, a town badly damaged during the war. Miss Huot has appeared before a number of dental meetings. One of the objectives of her venture is to establish the first training course for dental hygienists in France. To this end she is preparing a curriculum which may at some near future date become the nucleus of the movement in France. Miss Huot's success indicates the need for demonstration programs in a number of countries where dentists must seek trained aids to carry out effectual programs.

In the years between the two world wars, there was a very decided effort to bring the dental hygienist into the health program of Germany. Mrs. Irmgard Oestereich Menke, returned after her training course at Columbia University and several years of practice in the United States, to her native Germany and was prepared with the authority of the Dental School of Berlin to institute the first course of training for dental hygienists. Her plans were stopped by World War II. Mrs. Menke, an American citizen has since returned to the United States. At present there is at least one, and perhaps more, dental hygienists working with the occupation forces in Germany. Mrs. Virginia G. Anderson, a graduate of Eastman Dental Dispensary, Rochester, New York, has writ-

ten an enlightening article of the dental needs of the people of Germany and the possibilities for service of dental hygienists there. It appeared in the Dental Hygiene Quarterly, January, 1948.

In England during World War II a limited number of dental hygienists were trained in the Royal Air Force, in order to provide dental prophylaxis for the flying personnel. A group of dentists of England realized the value of such services and following the war have established the first group training program within a dental school. This movement, however, has not received much publicity in order that it may progress, without fear of public opposition, to become a full scale experiment within one institution. Once again the fear of malpractice is evident. A number of enthusiastic English dentists are supporting the project which may be expected to show evidence of growth within a year or two. The author has on a number of occasions given suggestions and material for the training course.

There are many manifestations that the South American Countries are cognizant of the value of dental hygienists. Among those who have sought information in reference to laws governing the practice of dental hygienists and training standards are Argentina, Bolivia and Colombia. With the wider participation of women in public life in the countries of Spanish culture, we may expect an increase in interest among educated women of these countries in the vocation of dental hygiene. There is also evidence that dentists are willing to employ women in their offices in these countries in order to provide more service for the people.

The first action among the Latin American group comes from Puerto Rico. During the annual dental meeting in February, 1947 in San Juan, Dr. F. G. Garcis, President of the Puerto Rican Dental Society sponsored the Dental Hygienist movement

and requested the author to prepare a law governing the practice of dental hygiene in that island. At the present time there are several Puerto Rican women in training in dental hygiene schools in the United States who will return to their island to take up public health work and to give service in private dental offices.

Dr. Abraham Rapaport of Argentina, public health dentist of Avellaneda, Argentine and Dr. Carlos E. de Oliva Paz, dentist to President Peron showed considerable interest in the training of women for the dental health program of their country.

Foremost among dental health programs in the use of trained women is New Zealand. Reports of the results of the child care program indicate that in expanding the field of service for dental hygienists dental treatment has been provided for larger numbers of children at low cost. However, there has been no objective appraisal of the program by dental authorities outside of New Zealand. The first group of Dental Nurses were graduated in 1923. The number of trainees has increased each year with expansion of the program.

CONCLUSIONS

In conclusion it may be stated that over a period of thirty-three years, the dental hygienist has proved her value and worth in providing dental

health education and services to the American people. The standards for the education of dental hygienists have been stated. Accrediting of schools is now in progress, through the Council on Dental Education of the American Dental Association. The profession is represented in the United States by the American Dental Hygienists' Association which seeks to uphold the standards of education and to recruit desirable candidates for training. Through their efforts, the dental hygienist is finding her place in the dental health programs of other countries. It is reasonable to expect this movement to become increasingly important as better dental health programs are developed throughout the world. As a vocation, restricted to women, the registered dental hygienist offers service to humanity and takes her place among the vitally needed health workers of the world.

630 West 168 Street, New York.

REFERENCES

1. Fones, Alfred C., "Mouth Hygiene", Lea & Febiger, Philadelphia 1942, p. 344.
2. Stoll, Frances A., "The Education of the Registered Dental Hygienists", Dental Items of Interest, Brooklyn, N.Y. August. 1945, p. 740.
3. Horner, Harlan H., "The Council on Dental Education", New York State Dental Journal, June-July, 1947, p. 320.
4. O'Rourke, J. T., "Analysis of a Survey of Dental Hygienists in United States", Journal of the American Dental Hygienists' Association, January, 1948, p. 6.
5. Smith, Anna Kalet, "Norwegian Schools Offer Health Services to Children", The Child, U.S. Children's Bureau, Washington, January, 1948. (International Cooperation Service.)

When you face a dentist you expect him to have some basic training but above all to combine with it certain skills and mastery of manual procedures that will leave you a happier and no less aesthetically presentable citizen. Your misery would only be increased if he made you a subject of prolonged research then turned you over to a dental mechanic for rehabilitation. Emphasis upon definite technical skill has given American dentistry a deserved pre-eminence. But this is not to say that if we were to choose professional fields that would profit by research and reward all effort to support them, we would not put dentistry well up on the list.—Dean Ford of the Graduate School, Univ. of Minnesota.

"Resolve to perform what you ought; perform without fail what you resolve. Wrong none by doing injuries or omitting the benefits that are your duty. Be not disturbed by trifles."—B. Franklin.

A STUDY OF THE DENTAL CARIES EXPERIENCE IN CHILDREN OF SCHOOL AGE

by HUGH R. McLAREN, D.D.S., D.D.P.H., Ottawa, Ontario

Assistant Chief, Dental Health Division, Department of National Health and Welfare

DENTAL CARIES constitutes the major hazard to dental health in the years of childhood and adolescence. Outstanding among the epidemiological features of the disease are its unusually high attack-rate, its usually insidious and unspectacular onset, its multiple causation, the fact that, once a carious lesion is produced in a tooth, evidence of such attack can never be obliterated from the mouth, and that, up to the present, no demonstrable means of controlling dental caries on a group basis has been available.

It has been apparent for some time that dental caries is probably the most extensive, yet most neglected, problem to be encountered in child health. Dental defects due to the carious process and its sequellae tend to accumulate more rapidly than can be effectively dealt with by the present capacity of the dental profession to treat such disorders. As the effective demand for dental health service for children grows to the point where it will approximate the present needs for such service this situation will worsen, unless more complete knowledge of the aetiology of dental caries will permit the application of dependable, proven preventive measures, or, unless the back-log of accumulated and untreated dental defects presently to be observed in the average community can be prevented from piling up by the institution of timely dental care for the present generation of infants and young children, who will be tomorrow's citizens.

If for no other reason, the widespread prevalence of dental caries would account for the increasing importance of this disease as a public health problem. To empirically state

as a fact that dental caries is the most wide-spread of human diseases, to say that more than nine of every ten persons are its victims, is not enough. We have few available public health records of the incidence and prevalence of dental caries, or of other oral and dental disease; which means that we know little or nothing about the actual state of the oral health in our communities.

The need for accurate data on the relative incidence and prevalence of a disease has never been more imperative than in the case of dental caries. Such information is necessary not only for the planning and organization of community dental health programs, but also because detailed knowledge of this type is basic to the epidemiological investigation of the whole perplexing riddle of dental caries. In seeking such information, the use of techniques found to be useful in studying other "crowd diseases" may well assist in the ultimate solution of the problem of dental caries¹. The application of epidemiological principles, and the use of statistical method have proven of great value, already, in the investigation of dental problems; Klein, Palmer, Knutson, Gafafer and others have ably demonstrated the usefulness of these tools to the dental investigator^{1,2,3,4}. The success of statistical method, in many fields of physical and biological science, in revealing laws underlying phenomena which had remained hidden and could not be determined by individual observations, as well as in highlighting previously obscure cause-and-effect relationships, suggest its potential value in the study of dental caries.

Several studies of the dental caries

experience of American school-age children have been reported in recent years⁵. However, with the notable exception of the Timmins study⁶, little available data exists concerning the incidence and prevalence of dental caries among children in Canada. In the hope that such studies may be stimulated thereby, in other communities in Canada, this report of an investigation into the dental status of school-age children in an Ontario city is presented.

Windsor, a progressive and busy manufacturing centre, is situated in southern Ontario, due south of Detroit, Michigan, from which city it is separated by the Detroit River. The population (1946) is approximately 120,000, of whom some 16,500 are children between the ages of five and sixteen years. The suburban population and adjoining municipalities add another 25,000 people to the population of the Windsor area. The city of Windsor and its environs are served by 45 dentists (1946), the dentist-population ratio being 1:3200. The potable water supply, obtained from the Detroit River, contains 0.016 p.p.m. fluorine. In racial origin, the population is 59% British, 18% French, 10% Polish, German, Ukrainian and Italian; in the remainder, there are some twenty-six additional racial groups represented⁷.

For some years, prior to the second World War, emergency dental services were provided in the city's schools, the program being administered by the Board of Education. These services were discontinued early in course of the War. The operation of school health services became a function of the City of Windsor Local Board of Health in 1945; in July, 1946, the Dental Health Division of the Board of Health was instituted, under the direction of the author. During the period between September, 1946, and July, 1947, 7371 elementary school pupils, between the ages of five and sixteen years (age taken as last birthday) received dental examinations.

Examinations were performed by the writer, in school health-centres, under good conditions of lighting. Instruments used were No. 4 plane mirrors and sharp, fine-pointed "rat-tail" explorers. 3X magnifying loupes were worn by the examiner, and were used throughout the course of the entire study. Methods employed in conducting the study were based upon those developed in the Hagerstown Study, carried out several years ago, by the United States Public Health Service^{2,3}. The examiner's findings were recorded by a specially-trained dental assistant.

The examination-blanks used for recording findings and observations made in the dental examinations were developed and modified from experimental blanks used in conducting preliminary sampling-studies during the summer of 1946. The criteria suggested by Randolph and Walker were used as a testing-device on each of the items which it was desired to record^{8,9}. In its finally-modified form, the dental chart used is very similar to that currently being sponsored by the Dental Public Health Committee of the Ontario Dental Association.⁸ Dental caries experience was recorded in terms of decayed, missing and filled teeth, and also tooth-surfaces. Teeth indicated for extraction, and abscessed teeth were recorded separately; observations of dental caries experience in deciduous and permanent dentitions were also separately recorded. Teeth designated as carious were those which, objectively, exhibited definite carious lesions. Pits and fissures which, at the time of examination, were considered to be non-carious were recorded as separate items. From the recorded data a numerical expression of total caries experience was derived, in terms of age-specific caries attack-rates. 2:4:10

Total caries experience, in the case of permanent dentitions, is readily measured quantitatively by taking the sum of decayed, filled and missing permanent teeth, since the evidence of caries-attack, past as well as present, can never be obliterated from an individual's mouth; missing permanent

teeth, when one is dealing with large groups of young persons, may be presumed to have been lost as the result of previous dental caries.⁴⁻¹⁰ Filled teeth, obviously, are so because of previous caries attack, while untreated decayed teeth remaining in the mouth give a complete record of present dental caries activity. The problem arises, however, when measuring dental caries in terms of permanent-tooth surfaces involved, of assessing past caries activity in teeth now missing. Each tooth has five coronal surfaces, all of which are exposed to caries-attack; it has been suggested that one may arbitrarily ascribe a value of five DMF surfaces, per missing permanent tooth, in summing tooth-surfaces which have been attacked by dental caries.¹¹ In the light of clinical observation, however, this appeared to the author to be too high a value. The data on tooth-surfaces involved by caries in teeth indicated for extraction, recorded during this study, indicated, when processed, that a value of three DMF surfaces (the weighted mean) appeared to be a fair estimate. Accordingly, this value has been ascribed to missing permanent teeth when measuring dental caries in terms of DMF surfaces during the course of this study. Teeth with only remaining roots were ascribed a value of five DMF surfaces.

Caries attack-rates in the case of deciduous dentitions cannot be expressed quantitatively with the degree of exactness which can be achieved when one deals with permanent teeth; the reason being the inability to determine, in many instances, whether a missing deciduous tooth has been lost because

of previous caries, or whether normal physiological exfoliation was the cause. However, a reasonably reliable index of deciduous-tooth caries experience may be constructed by taking the sum of all deciduous decayed, filled, and indicated for extraction and expressing the results in the form, similar to the DMF rates of permanent dentitions, of age-specific def rates. While not so precise as the DMF rate is in describing caries experience of the permanent teeth, the def rate does provide a reasonable and convenient means of evaluating and describing the trend of deciduous-tooth caries attack, when dealing with large groups of children in the appropriate age-groups.

Data concerning the prevalence of dental caries in deciduous teeth of 6133 children between the ages of five and eleven years are presented in Table I. 85 per cent of children in this group were found to exhibit one or more def teeth. 387, or 66 per cent of children examined in the 5-6 year-group exhibited deciduous-tooth caries, the average number of deciduous teeth decayed, filled and indicated for extraction, being 344 per 100 children. In the 8-9 year-group, the prevalence of deciduous-tooth caries was observed to have increased to slightly more than 90 per cent of those examined. The caries attack-rate for this age-group was found to be 540 def teeth per 100 children. As chronological age increased from 5 years an increase was noted, not only in the prevalence of dental caries, but also in caries attack-rate of deciduous teeth, until age 8-9 years. Beyond this age there was, as one would expect, a decrease in the num-

DENTAL CARIES EXPERIENCE, DECIDUOUS TEETH

	Age (taken as last birthday)						
	5	6	7	8	9	10	11
No. Examined.....	584	1706	1445	1246	607	257	288
Caries prevalence:							
% with 1 or more def. teeth	66.2	79.1	86.7	92.2	91.8	88.0	88.5
Caries attack—rates, per 100 children def.....	344	459	535	542	490	365	160
							400

TABLE 1

bers of children in each age-group who exhibited deciduous-tooth caries, as well as a lowered caries attack-rate. That this is so is probably chiefly due to the fact that, from the age of 8½ years, progressively fewer deciduous teeth remain in the mouth, because of physiological exfoliation. It is notable that, in the group of 6135 children studied with respect to deciduous-tooth caries experience, a total of 4653 deciduous teeth were observed to be prematurely missing (lost more than six months earlier than average time of exfoliation), and that a further total of 4538 such teeth were indicated for extraction, due to pulp exposure, apical abscesses, and irreparable tooth-destruction.

Findings concerning dental caries experience with respect to permanent dentitions are summarized in table II. The group studied comprised 7371 children, between five and sixteen years of age (age taken as last birthday). As was observed in the study of deciduous-tooth caries experience, increases were noted in both the prevalence (the number of existing cases) of dental caries in the permanent-tooth populations, and in the average number of decayed, missing and filled (DMF) permanent teeth, and tooth-surfaces, with increasing chronological age. The prevalence of dental caries,

considering all ages, was found to be 77 per cent; the DMF rate being 470 DMF teeth per 100 children, all ages. In the youngest age-group studied, 5-6 years, 1727 children (approximately 30 per cent) exhibited at least one DMF tooth; 686 children between 6 and 7 years, or 40 per cent of the group studied, were observed to have permanent-tooth caries. In the 9-10 year age-group the prevalence of dental caries had increased to 81 per cent, and in all age-groups beyond that of 11-12 years, the caries prevalence rate exceeded 90 per cent.

For the group between 5 and 6 years of age the caries attack-rate was found to be 45 DMF teeth per 100 children; the average caries experience, measured in terms of affected tooth-surfaces, was also 45 DMF surfaces per 100 children, in this age-group. In the 6-7 age-group, the caries attack-rate had increased to 70 DMF teeth, 80 DMF surfaces, per 100 children. At age 8-9 years these rates were found to have increased to 215 DMF teeth, and 215 DMF surfaces; at age 10-11, to 382 DMF teeth, 430 DMF surfaces. 825 DMF teeth, and 1003 DMF tooth-surfaces, per 100 children, were observed in the 14-15 age-group. At age sixteen years (last birthday) the average number of DMF teeth, and of DMF tooth-surfaces, per 100 children, was

DENTAL CARIES EXPERIENCE, PERMANENT TEETH

	Age (taken as last birthday)												all ages
	5	6	7	8	9	10	11	12	13	14	15	16	
No. Examined.....	584	1706	1445	1246	607	257	288	517	307	203	105	106	7371
Caries Prevalence: % with 1 or more DMF teeth.....	29.5	40.2	55.9	72.8	81.1	87.7	89.0	93.7	94.1	95.1	94.3	95.4	77.4
No. DMF Teeth per 100 children.....	45	70	149	215	261	382	480	620	681	825	850	1066	470
No. DMF Surfaces per 100 children.....	45	80	174	215	346	430	575	775	855	1003	1173	1348	585
D (Teeth) per 100 children.....	45	60	137	193	223	310	288	379	462	535	500	525	303
M. (Teeth) per 100 children.....	0	9	8	6	11	34	58	97	94	100	124	180	65
F (Teeth) per 100 children.....	0	0.6	4	16	22	38	134	144	125	190	256	362	117
Tooth Mortality Rate per 1000 children (Missing & indicated for extraction).....	0	35	40	93	173	610	885	1200	1300	1390	1550	1810	826

TABLE 2

found to be 1066, and 1348 respectively.

The incidence of dental caries, i.e., the number of new cases occurring within a given interval, usually one year, may be measured directly or indirectly. The first approach would, of course, involve serial studies on the same group; examinations would be made and recorded at yearly intervals, over a period of several years, in order that average rates of caries incidence might be derived. In reporting this study, however, caries incidence has been measured indirectly.

Since evidence of caries activity is recorded permanently in an individual's mouth, a dental examination will reveal his total caries experience from the time of eruption of his first permanent tooth, at about age six, to the moment of his being examined. The total number of DMF teeth, or tooth-surfaces, exhibited in the mouths of twelve year old children, for example, constitutes an exact record, quantitatively, of their accumulated caries experience up to their present age. This is also the case with regard to children who are a year older (thirteen years) except that, when one is dealing with large and representative numbers of children, the accumulated caries experience of this group will be greater than that of the group which is a year younger. This increase is made up by the number of carious defects occurring in the thirteen-year group during the interval between their twelfth and thirteenth years; readily measurable, this increment between any two successive age-groups may be considered to be a reasonably accurate expression, quantitatively, of caries incidence.⁵ While the annual increment of carious dental defects may be expected to vary between different pairs of successive age-groups, the average incidence can be calculated by statistical processing of the recorded data.

Furthermore, when the data of accumulated caries experience are plotted against their respective age-levels, the existence of a "straightline" correlation between the variables "age" and "caries experience" is suggested.

Statistical treatment of the data will test the validity of such an inference; employing the method of "least squares", the presence of such correlation, if it does in fact exist, can be verified, since results obtained when processing data in this way are definite and quite independent of any subjective estimate. Stated briefly, the principle of the method of least squares is the determination of the line, or curve, that best describes the trend of the data being treated. For any series of values there can be but one line, or curve, possessing this qualification.¹²

The form, or trend, of the relationship between the data presented in Table I, when thus tested, was found to be that of a straight line; the existence of direct linear correlation between chronological age and accumulated age is thus verified. When superimposed upon the plotted data, the line which was derived, the line of regression, was found, by inspection, to fit the trend of increasing, cumulative dental caries experience as chronological age advances. The coefficient of the slope of the line of regression with regard to the data concerning DMF teeth was found to be 0.97, for that concerning DMF surfaces, the coefficient of regression was found to be 1.23. In other words, the data obtained in this study of dental caries experience among Windsor's children of school age indicate that new carious defects tend to occur at the rate of 97 DMF teeth per 100 children, or 123 DMF surfaces per 100 children, per year. (The observed caries-incidence rates were found to be, by indirect measurement, 99 DMF teeth, or 126 DMF surfaces, per 100 children per year.)

SUMMARY

The data presented in this report of a study of the dental caries experience among school children in Windsor, Ontario, support the statement that, in the years of childhood and adolescence, dental caries is the major hazard to dental health. Quantitatively, they

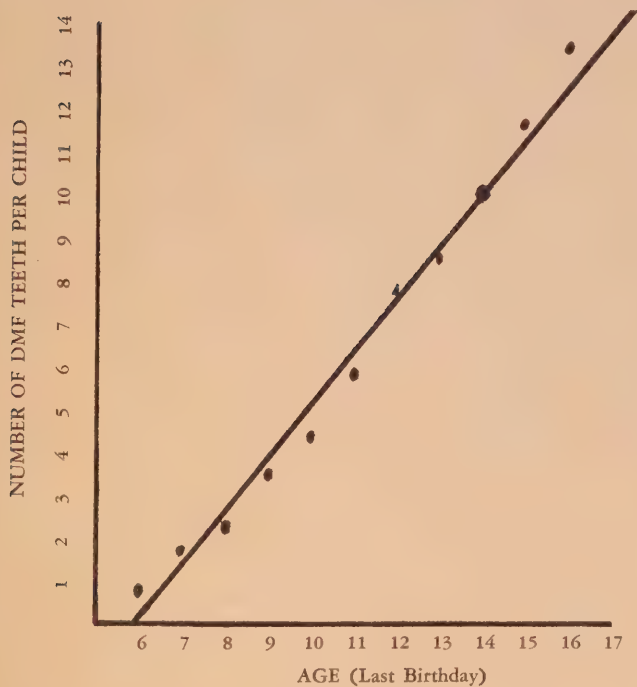
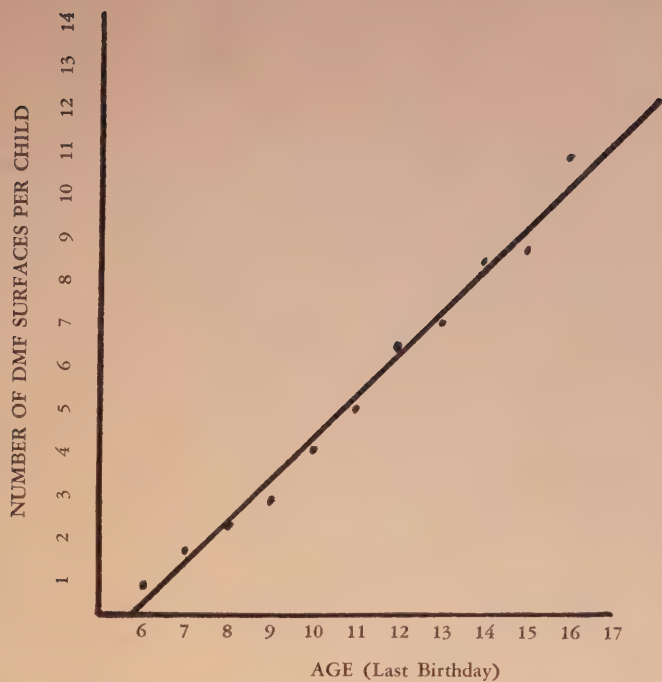


FIG. 1.

Regression lines of relationship between age (in years, last birthday) and number of DMF teeth, and DMF tooth surfaces, per child.

suggest this disease to be a public health problem of major and ever-growing importance. More than 8 of every 10 children studied, under twelve years of age, were observed to have defective deciduous teeth, the average number being 4 def teeth per child. Approximately 150 prematurely missing deciduous teeth per 100 children in this age-group, were observed.

Nearly 80 children, of every 100 examined during the course of this study exhibited carious lesions of permanent teeth. Caries attack-rates, all ages, were found to be 470 DMF teeth, or 585 DMF surfaces, per 100 children. The prevalence of dental caries exceeds 90% in all children older than eleven years. New carious defects of permanent teeth occur at the rate of almost one additional tooth, and about one and one-quarter tooth surfaces, per child per year, with the result that, at the age sixteen the average pupil exhibits nearly eleven DMF teeth, with some fourteen tooth-surfaces involved. Considering all ages, the Tooth Mortality Rate was found to be 835 missing permanent teeth per 1000 children; in all children beyond the age of twelve years, there was found to be more than one such missing tooth per child, on the average, and by the time children had reached the age of sixteen years, nearly two teeth per child had been lost.

COMMENT

The findings of this study indicate that the back-log of accumulated and untreated dental defects due to dental caries is such in the elementary school population alone — which comprises less than 15% of the population of this community—that the full treatment services of forty-five dentists would be required over a period of one year, in order to eradicate existing defects. To the present dental needs of this segment of the general population, there are added, each year, new carious defects involving on the order of 15,000 additional teeth, and 21,500 additional tooth surfaces, to say nothing of the

new carious defects occurring in deciduous teeth.

As far as the population at large is concerned there would appear to exist, at the present time, no practical means of stemming the tide of its combined dental needs with existing dental personnel, facilities and present-day methods. Dental defects due to dental caries, and their sequelae, are accumulating much more rapidly than the present capacity of the dental profession can effectively deal with them. The prospect of resolving the problem along traditional lines of dentist-patient relationship appears remote, and offers little promise.

Sound public health practice demands that the incidence of a disease be drastically reduced if control is to be achieved. This would appear to hold especially true with regard to dental caries control. The magnitude of the dental caries problem, which, to quote Parran, "grows like a snowball", emphasizes the need for the development of methods of caries control—of which, topical sodium fluoride is one which will be less costly, less time-consuming, more effective, and, in addition, not only usable but also used by practising dentists.

REFERENCES

1. Gafafer, W. M.: *Statistical Methods in Dentistry*. Dental Science and Dental Art (Gordon) pp. 675-702.
2. Klein, H., Palmer, C. E., Knutson, J. W.: *Dental Status and Dental Needs of Elementary School Children*, U.S. Pub. Health Rep., 1938, 53: 751.
3. Knutson, J. W., Klein, H.: *Tooth Mortality in Elementary School Children*, U.S. Pub. Health Rep., 1938, 53: 1021.
4. Klein, H., Palmer, C. E.: *On the Epidemiology of Dental Caries*, University of Penn. Press, 1941.
5. Klein, H., Palmer, C. E., Knutson, J. W., et al.: *Studies on Dental Caries*.
I. *Dental Status and Dental Needs of Elementary School Children*, U.S. Pub. Health Rep., 1938, 53: 751.
IV. *Tooth Mortality in Elementary School Children*, U.S. Pub. Health Rep., 1938, 53: 1021.
V. *Familial Resemblances in the Caries Experience of Siblings*, U.S. Pub. Health Rep., 1938, 53: 1353.
VI. *Caries Experience and Variation in the Time of Eruption of Permanent Teeth*, Child Development, 1938, 9: 203.
VII. *Sex Differences in Dental Caries Experience of Elementary School Children*, U.S. Pub. Health Rep., 1938, 53: 1685.
VIII. *Relative Incidence of Caries in the Different Permanent Teeth*, J.A.D.A. 1938, 25: 1923.

- IX. Prevalence and Incidence of Dental Caries Experience, Dental Care, and Carious Defects requiring treatment in high school children. U. S. Pub. Health Rep. 1940, 55:1258.
- XI. Sex Differences in the Caries Susceptibility of the Various Morphological Types of Permanent Teeth, Child Development, 1941, 12:207.
- XII. Comparison of the Caries Susceptibility of the Various Morphological Types of Permanent Teeth. J. D. Res., 1941, 20:200.
6. Marshall, T. R.: Survey and Study of Dental Service Needs. J.C.D.A. May, 1945.
7. Canada Year Book, 1946.
8. Randolph and Walker: Recording of Local Health Work, Commonwealth Fund, 1935.
9. McLaren, H. R.: The Public Health Dental Chart, J. Ont. D.A., Feb., 1947.
10. Klein, H., Palmer, C. E.: The Dental Problem of Elementary School Children, Milbank Mem. Fund Quarterly, 1938, 16:267.
11. Klein, H., Palmer, C. E.: Studies on Dental Caries IX., U.S. Pub. Health Rep. 1940, 55:1258.
12. Day, E. E.: Statistical Analysis, MacMillan, 1930, 180-2101, pp. 258-263, 313-327.

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PERSONALITY FACTORS AND DENTAL CARIES

by Dr. I. B. HYAMS, Montreal, Quebec

THE dental profession has been tilting at windmills in its search for the aetiology of dental caries. Periodically new angles are unearthed and developed so that more fragmentary knowledge is added to our already overburdened capacities. Each discovery garners its share of adherents. Gradually the din subsides and we are left where we were before. The situation requires synthesis. Each fragment of information is of value. The synthesis lies in applying the data to a comprehensive compendium of facts which will bear the ring of truth. We look to the field of psychosomatics which has contributed so much to the understanding of previously obscure medical aetiology. The reader will have to bear with me in the chain of reasoning to follow because much that is given may be rejected and viewed with skepticism. For that reason analogical references will be used to clarify situations as they present themselves.

First it must be stated that the entire process has not been worked out. By the same token in many complex general pathological interrelationships, the entire mechanism has not been solved. The therapeutic test which results in cure is assumed as proof positive that the mechanism exists, and further research will un-

doubtedly clarify the situation. Already many theories exist for the psychosomatic mechanism which is operative. The fact that there are many theories means that we do not know which is the correct one.

On the one hand we have theories attempting to apply a pathological explanation for the carious destruction of teeth. On the other hand we have the philosophic thinkers pointing the finger at civilization. Both are right. They are looking at the same entity. One school answers the question what happens and how it happens. The other school attempts an answer at why. If we can correlate these two schools in a single system of thinking we shall have gone far towards solving that old chestnut of why teeth decay.

I deem it unnecessary to review the numerous pathologies which account for caries. It boils down to two factions: primarily acidogenic organisms at work dissolving enamel, reaching dentine then proteolytic organisms invade for dentine lysis; or primarily proteolytic organisms invading the sheaths, and lamellae reaching dentine and continuing their work aided by acid action (Gottlieb). These descriptions tell what happens and how it happens. But why do the organisms get to work? We know the factors that aid them. Fosdick has charted them admirably. But still why?

The answer is psyche. We have been at fault in seeking the what and the how without realizing all the while that without the why we still left unanswered the greatest part of the maze. We all know that the ingestion of refined carbohydrate whether it be sugar in tea or coffee or whether it be the soft drink or the sweet cake or the jam or jelly or the white bread is detrimental to tooth structure under certain circumstances. We all know the effects on tooth structure of the unhygienic mouth in certain circumstances. But what we have forgotten is the effect of the saliva variations on the activity of the organisms. We know that a good saliva is protective, but that a bad saliva leads to destruction. We know furthermore how emotional states may influence the quantity of saliva, thus dry mouth of fear, drooling in idiocy, etc.

What we do not remember is that salivary pH can be altered by the emotional states. The pH of the saliva influences bacterial action encouraging or discouraging carious activity. The acidogenic school of thought feels that caries abounds in the mouth which is more acid. Gottlieb feels that the reverse is true. But this much we know that in excited states the saliva becomes more alkaline; in calm states the saliva becomes more acid.^{1, 2, 3, 4}

A contribution of more current significance is that qualitative changes in the saliva are found in psychosomatic disturbances⁵. This becomes more significant in the light of recent research work by Crowell of the Forsythe on Tryptophane, Kesel on the amino acids and NH₂ ion and Eggers on the phosphatase mechanism. It would serve to explain the why of these mechanisms.

Proof of the validity of psychosomatic manifestations needs no further elaboration. Any gastro-enterologist attests to its correctness. Psychiatrists treat symptoms of functional causation by psychotherapy, e.g. hysterical paralysis.

In synthesis, therefore, when we

have completed the repair of the destruction on carious mouths, and we have asked ourselves why this patient's teeth decay so rapidly, we must formulate answers to several questions. To what extent is the carious process in this individual due to ingestion of carbohydrates? To what extent is it due to lack of detergency due to soft food or temperamental disinclination to chew? To what extent is the carious destruction helped by quantitative and qualitative salivary influences of a psychosomatic nature?

We may presume to answer these questions very superficially. A moment's thought will reveal how each of these questions is tied up with the personality. We feel that attention to patient dental education will look after all but the last factor. In this we must recognize that psychotherapy may be necessary. Re-education for life so that attitudes may be channelized into proper directions may be indicated. The man with ulcers, the man with diabetes, the man with hysterical paralysis; all may suffer from the same misdirected emotional drives. Similarly the man with dental caries. Objections will be that almost all civilized races suffer from caries. Verily so. And unless the strains of civilized living are channelized into directions of philosophic acceptance and in conformity with situations encouraging satisfaction and not emotional and repression conflict from the dental scientist's point of view, the teeth of civilized man are doomed to carious disintegration.

REFERENCES

1. Starr, H. E.—Hydrogen ion of saliva as an index of fatigue and emotional excitation applied to stammering—*Am. J. Psychology* 33, 1922, 394-418.
2. Rich, G. J.—Biochemical approach to personality—*J. Abnormal & Social Psychology*—23, 1928, 158-175.
3. Rich, G. J.—Body acidity as related to emotional excitability—*Archives of Neurology & Psychiatry*—20, 1925, 589-594.
4. Rich, G. J.—Some relationships between personality & body chemistry—*Jour. Neurology & Psychopathology*—14, 1933, 32-38.
5. Wittkauer, E. & Pilz, W.—Zur affektiven Beeinflussbarkeit der Speichelsekretion (Ueber affektive-somatische Veränderungen VI) *Klin. Wchnschr*—11, 1932, 718-719.

The Forum

QUESTIONS ASKED BY PARENTS RELATIVE TO CHILDREN'S DENTISTRY

by CLAUDE W. BIERMAN, D.D.S., Minneapolis, Minnesota

From *F. Review of Chicago D. Soc.*, May 15, 1948

Question: At what age should a child have his or her first dental appointment?

Answer: At eighteen months or when the first deciduous molars have erupted. The enamel and formation of the teeth is studied for any malformation, the teeth are polished and the parent is instructed in the proper home care for the child's mouth.

Question: Why should a child have dental trouble if given an adequate diet?

Answer: Today's diet will not prevent decay, but by augmenting the diet with adequate office and home care one can avoid much dental trouble.

Question: Do you prefer parent in operating room?

Answer: Personally I invite the parent into the operating room. The parent and child are both benefited psychologically by not being separated. The dentist tells the parent how he or she must act to encourage the child's cooperation. The operator's procedure in handling any child must not be interfered with by the parent. The educational value of having the parent present is of paramount importance. It is an opportunity that is missed by many if parents are not invited into the operatory with the child.

Question: Why is it necessary to x-ray the first teeth?

Answer: To locate interproximal decay. To determine the depth of decay and its proximity to the heart of the tooth. To determine whether all permanent teeth are developing, etc.

Question: Do you advise the removal of abscessed teeth?

Answer: By all means.

Question: If teeth are removed, will it affect the dental arch?

Answer: Yes, for often the space closes. This space should be measured and, if it is closing, a space retainer should be placed.

Question: Do repeated polishings harm the teeth?

Answer: Not if a polishing material is used and not an abrasive, such as pumice.

Question: What do you mean by regular dental supervision?

Answer: Regular dental supervision means seeing the child at least once every three months for a prophylaxis and examination. This service might be termed "Dental Guidance."

Question: Are dental operations for children always painful?

Answer: No. Most of our services to children are a pleasant experience rather than a dreaded ordeal. This can only be obtained by regular dental supervision.

Question: If the first teeth are "temporary" and soon will be lost, why fill them?

Answer: The first teeth in a child's mouth are not "temporary," but are deciduous, and some teeth must function until the child is ten or twelve years of age.

Question: How much will it cost to fill a tooth?

Answer: Never give fee costs over

the telephone. See your patient first, and remember your fee must be determined by the child's cooperation, type of cavity and type of filling to be used.

Question: Doctor, do you charge to

examine a child's mouth?

Answer: An examination fee must be charged unless the examination, as given by the operator, does not have any diagnostic value. Charge an honest fee and give an honest service.

ACTINOMYCOSIS

by RIEVA ROSH, M.D., and HARRY M. SELDIN, D.D.S. New York

Condensed from Jour. of Oral Surgery, April, 1948

There is no specific therapy for actinomycosis. While radical surgery in these cases is contraindicated, difficult, and often results in excessive disfigurement, adequate surgical drainage always is necessary. Wherever possible incision should be made extra-orally in order to prevent the spread of the organisms to the digestive and respiratory tract through swallowing or aspiration. Until the discovery of chemotherapy, surgical drainage, with the administration of potassium iodide, was the common method of treatment employed, although such substances as copper sulphate, potassium permanganate, sodium iodide, arsphenamine, autogenous and stock vaccines and extracts of lymphoid tissue have been tried with questionable results. In many cases roentgenotherapy was given. The latter method was not employed always. However, in some prolonged cases it finally was resorted to.

With the advent of chemotherapy, sulphonamide derivatives as well as penicillin were given in varying doses. Some clinicians report that the majority of organisms from cases of actinomycosis in human beings proved insensitive to penicillin. Roentgenotherapy appeared to offer good possibilities. However, it is believed that a combination of roentgenotherapy, surgery providing adequate drainage and chemotherapy will give optimum results. Although the administration of potassium iodide recently has been discredited, chiefly because of its tendency to produce painful skin rashes, it is believed that when it is given in large doses within the tolerance of the

patient the duration of the disease is shortened considerably. Its chief therapeutic value probably is due to the reduction of swelling resulting from the absorption of granulation tissue which potassium iodide is known to induce. For this very reason, the drug should never be employed where a coexisting tuberculosis is suspected or has been proved present.

Early diagnosis and prompt treatment will lead to cure, while delay can lead to deformity, ankylosis of the mandibular joint, spread of the infection and even death.

The main complication of cervicofacial actinomycosis is false ankylosis of the jaw. The use of cones, gags and continuous exercise during therapy will prevent this.

Draining sinuses should not be allowed to close until cultures are negative on at least two of three tests. However, a cure may be considered accomplished only if a period of six months has elapsed without recurrence of any symptoms.

Roentgenotherapy has proved to be a most useful therapeutic measure. Although radium therapy may be employed, roentgenotherapy is simpler and more effective. In our practice fractionated deep roentgenotherapy, using HLV 0.9, 200 kv., 5 ma., 0.5 copper filtration, 1 al. gave best results. Small doses, 100 r. to 150 r., measured in air over a field covering the involved area, are given two or three times a week up to 600 r. to 1,200 r. Another course may be repeated in three to four weeks if necessary. Some roentgenologists employ much larger

doses, but most agree that smaller doses have proved more effective. Better clinical results are observed and there is no danger of skin changes. The tendency toward scar formation which is so characteristic of the disease is minimized greatly through the proper administration of roentgenotherapy. The scars are smaller, softer and there is far less contraction.

The mode of action of roentgenotherapy is difficult to explain. The possibilities are:

1. Desjardin's theory of the liberation of antibodies from disintegration of leukocytes locally under the influence of radiation.

2. Vasodilatation locally.

3. Possible direct lethal effect on the organism.

WHY THE NECESSITY FOR ACCURATE BALANCED AND FUNCTIONAL OCCLUSION?

by FRED S. MEYER, D.D.S., Minneapolis, Minnesota

Condensed from F. Review of Cbi. D. Soc., July 1, 1948

You may have a functional occlusion without a balanced occlusion, or a balanced occlusion without the best in functional occlusion. For instance, when an older person wears his teeth down too much, the greatest wear will be on the buccal of the lower and the lingual of the upper. He will, therefore, have no contact on the balancing side, but he will continue to function on the working side and triturate his food without any apparent trouble, even though he is completely out of balance in the lateral excursions. But if he wears full upper and lower dentures, built with similar abnormal occlusal surfaces, the loss of contact on the balancing side will prevent the teeth from functioning without severe trauma to the underlying tissues, due to "rocking".

Dentures may function quite well at times where we have only a three point balance, that is, where we have only one or two contacts on the balancing side. But there you cannot be sure of balance, because a three legged stool will always balance. Dentures may be in balance where only a few teeth contact on each side, but these dentures will not function at their best. From this you will see that you have function without balance and balance without function. But you have the ideal in dentures when these dentures are in accurate balance dur-

ing all excursions of the mandible and when all opposing surfaces contact during these excursions.

Now the question arises: "How shall we attain that ideal in denture work?" To reach the highest ideal there are certain fundamentals which we must always bear in mind.

The first of these fundamentals is proper preparation of the dental arches. As far as possible they should be prepared in such a way as to remain reasonably healthy and stable, smooth and free from undercuts.

Another of these fundamentals of vital importance concerns the face-bow transfer; another the proper vertical dimensions, including aesthetics, centric relation, balance and function, etc.

Inasmuch as we are aware of major discrepancies taking place in waxing and processing, it becomes necessary to return each case to the articulator for occlusal correction before removing it from the cast.

The old idea that the teeth must show a little below the lip line when the lips are parted is erroneous. A photograph of the individual before the teeth were extracted will help to guide us in determining the length of these anterior teeth. The presence of a couple of relatives or old friends who are willing to criticize the dentures when set up in wax is a great help. You may tell them that it is easy

to please two or more who are in agreement, but you will not be able to please them if they disagree.

A patient may be in balance in centric as well as in lateral excursion and still be out of balance in protrusion. A patient may be in balance in centric and in a protrusive excursion and still out of balance in the lateral excursion. Or a patient may be in balance in centric relation and out of balance in the lateral excursions as well as in the protrusive. There is a definite reason for these failures. And failure to use the face-bow in the transfer of casts is usually mainly responsible for the above errors.

If in centric when placed in the mouth the dentures lose contact on the balancing side and in the posterior region in protrusion, there is a ten-

dency for the upper denture to drop on the balancing side in the lateral excursion and in the posterior end in protrusion due to lack of contact. What is the cause? The posterior end of the occlusal curve is too low in its relation to the anterior end. The posterior ends of the casts were mounted too high on the articulator in their relation to the anterior end. Reason? Failure to use the face-bow in the transfer. If in centric when placed in the mouth the dentures contact first on the working side in the lateral excursion and on the posterior end in protrusion, the posterior end of the occlusal curve is too high in its relation to the anterior end. The casts were mounted with the posterior ends too low in their relation to the anterior ends. Failure to employ the face-bow was again the probable cause.

It is well for a man to respect his own vocation whatever it is, and to think himself bound to uphold it, and to claim for it the respect it deserves.—Charles Dickens.

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"Forget it, Doctor . . . professional courtesy!"

CONTROLLING REACTION TO THE FEE

by LEWIS BLASS, Ph.G., D.D.S. and IRVIN TULKIN, D.D.S.

Condensed from N.Y. Jour. of D., June-July, 1948

The success of presentation of the fee depends largely upon the patient's understanding of dental treatment and his appreciation of the justice and fairness of the fee.

If the dentist quotes a fee based on a moderate fee scale and is met with shocked response from the patient who did not expect such a sum, something has been overlooked.

Was the dentist's educational method sufficient to overcome a background of low fees and low dental consciousness and create a willingness to make a sacrifice for good care?

Should the entire fee have been presented, if part of the service could best be rendered first?

Should a relative or friend have been present as an adviser to the patient?

Does the patient feel free to ask for protective care until he can have

all the services rendered?

Should the dentist have determined more fully the patient's temperament and financial readiness to accept a higher fee than he ever spent for his previous partial dental care?

Does the patient know how much less the fee might be if certain undesirable short cuts and omissions in service were made?

Does the patient appreciate the fact that the dentists' unit fees are reasonable but the total of accumulated dental neglect makes the fee greater than the patient expected?

Does the patient know the possibilities for arranging budgeted or divided payments?

Is the patient prepared to defend the need for services and the fee when someone at home remarks, "I think my dentist can do the same work for much less"?

THE EFFECT OF HUMAN FIBRIN FOAM UPON HEALING OF THE DENTAL SURGERY WOUND

by LEE P. SHARP, B.S., D.D.S., M.S.D.

Condensed from Northwestern Univ. Bul. Spring, 1948

Cases of multiple extractions were used so as to provide a control on the same mouth under similar conditions to the test case.

Each test socket was handled as follows:

Immediately following the extraction of the tooth, the socket was sponged dry and a section of fibrin foam about one-third the size of the socket was saturated with thrombin and was placed well into the socket and was retained by the placing of a roll of sterile gauze over the open wound. The patient was instructed to close and to hold firm pressure for five minutes.

The control sockets were handled as routine extractions; the tooth was removed and clotting was allowed to form normally.

At the end of the five-minute period the gauze was removed, the wounds were examined for further bleeding and the patient was then dismissed with instructions to return in twenty-four hours.

The treated sockets displayed an over-whelming superiority in healing over the control sockets. At the end of twenty-four hours, twenty-five of the treated sockets were considered very good in regard to healing; whereas, of the control sockets, only seven were considered abundant or very good, and twenty-one were considered moderate.

Probably the most interesting and significant factor shown is the effect of the material upon the healing of the wound.

It is well known that the supply of chemical and biological haemostatic

agents used locally for the control of bleeding in dental surgery, up to the time fibrin foam and thrombin were introduced, delayed healing for a period of several days.

For this reason, it is often contended that mechanical means of controlling haemorrhage, such as pressure and suturing or a combination of both, is the procedure of choice. In such cases, healing follows a normal pattern.

The placing of a dressing in a socket usually reduces the size of the blood clot, and healing, of necessity, must take place more slowly.

Human fibrin foam and thrombin

being biological products, their presence in the body does not act as a foreign agent, but rather is taken to kindly by the tissues and is accepted as a material part of the organized blood clot. As a result the tissues are fully covered and healing may occur normally with no complications to be expected, except where conditions exist which cannot be controlled.

In summarizing, it is firmly believed that fibrin foam and thrombin are the most adequate of the haemostatic agents, up to the time of their introduction, for use in the dental surgery wound in which an uncomplicated healing procedure is desired.

THE EFFECTIVENESS OF AN ADEQUATE DIET IN THE CONTROL OF DENTAL CARIES

by GENEVIEVE STEARNS, Ph.D., Research Professor of Pediatrics, University of Iowa College of Medicine, Iowa City, Iowa.

Summary of paper in Jour. of D. Research, June, 1948

To summarize, if the incidence of caries is related to the state of nutrition, we should expect the greatest incidence of caries during or shortly after periods of nutritional stress. Such periods occur at any age during illness, especially during chronic illnesses, though they be low-grade infections. Other known periods of stresses are: (1) the periods of rapid growth preceding puberty, (2) lactation, and (3) menopause. The incidence of dental caries is usually considered to be increased at about puberty. The incidence at the other periods of stress could well be studied.

In evaluating nutritional studies in relation to dental caries it is important to know the nutritional history of the subjects. Improvement of the diet in one respect only cannot be expected to bring improvement if the diet as a whole remains hopelessly below standard, or if the chief deficiency is other than the material supplied. The effectiveness of vitamin D, in particular, cannot be determined unless it is proved that the calcium and phosphorous intake is sufficiently

high to permit an increase in retention through the action of the vitamin.

When several factors of the dietary regimen have been altered, results cannot be ascribed to only one factor. That seems so obvious as to be trite, but still it is the most common error in research reports.

At the State University of Iowa, keeping children under strictly controlled dietary regimens, we have observed complete arrest of caries with diets high in sugar, and with diets low in sugar but always nutritionally adequate and well-absorbed. From our nutritional studies on normal children, we have concluded that the longer a child remains in a state of poor nutrition, the longer it takes for him to utilize a good diet when he eats it. Often many months must elapse before the child becomes well nourished. Under these conditions, it is slight wonder that many investigators feel that diet is not a major factor in the prevention of dental caries. It is not diet, but the state of nutrition which we believe to be an important factor in the incidence of dental caries.

PROBLEMS OF ORAL SURGERY CONFRONTING THE GENERAL PRACTITIONER

by WILLIAM L. SHEARER, M.D., D.D.S., Omaha, Nebraska

Condensed from F. Review of Cbi. D. Soc., June 1, 1948

Question: Describe postoperative care—type of irrigations, etc. and why.

Answer: Under no circumstances do I ever use ice because it retards the phagocytic action of the leukocytes. We must stimulate the phagocytic action of the leukocytes in order to have a physiological reparative process. Heat does this; therefore I use heat.

I use hot packs of fifty per cent solution of Epsom salts (or magnesium sulphate) as hot as patient can stand without burning. I use Epsom salts because it is a specific for the bacillus of erysipelas and the natural habitat of the bacillus of erysipelas is around the nose and mouth. Further, Dr. Nicholas Senn, that great surgeon in Chicago, advised me as a young man that ice had no place on the face and jaws for anything he knew anything about. I have found his advice to be solid and have practised it all through my practice. He stated emphatically that heat should be used and ice should not be used. Hot salt water irrigations should be given at least once a day.

Question: What sedation do you use in office and in hospital?

Answer: In the hospital, rather routinely I use morphine and atropine. Of course, it goes without saying that

I use other forms of sedatives when it is my judgment that morphine is not indicated. In my office, I rarely use anything but something like a nembutal or empirin compound with codeine.

Question: Discuss pyorrhea alveolaris and give your conception of its relationship to complications of the human body.

Answer: Pyorrhea is a disease of the pericemental membrane, and pus absorption from pyorrhea may be the cause of complications of any part of the human body. One of the most common is gastro-intestinal upset associated with gastric ulcers of the stomach. Most people with pyorrhea alveolaris have a fag and have a sense of unhappiness in their physical fitness. Complications of the human body are so great that most anything can happen from severe pyorrhea alveolaris, and it would require a book to cover these problems.

Question: When you make alveolectomies of the upper and lower jaws, how long do you leave the sutures in?

Answer: In the upper jaw I leave the sutures two, four or five days; in the lower jaw, I leave them eight to ten days.

TREATMENT OF HAEMORRHAGE

by KURT H. THOMA, D.M.D., Boston

Conclusion of paper in Jour. of O. Surg., July, 1948.

It may be said that a modern understanding of haematology and a thorough diagnosis of the local and fundamental causes of bleeding will help a great deal to eliminate the danger of primary and secondary haemorrhages. The newly developed constituents of blood which are available today are great aids to the dental and oral surgeon. Both the antihaemophilic globulin developed by the Department of

Physical Chemistry, Harvard Medical School, and provided by the American Red Cross for intravenous use, and the local preparation, the fibrin and Gelfoam used to apply thrombin, as well as other coagulants, rabbit globulin (Lederle Company) and beef thrombin in powder form or combined with tyrothricin compressed into convenient cones (Sharp and Dohme), make up a useful armamentarium for the treatment of haemorrhage.

FLUORINE THERAPY—BALLYHOO VERSUS HEALTH EDUCATION*Condensed from Editorial in N.Y. Jour. of D.*

Fluorine therapy may turn out to be one of the greatest of boons to mankind, but unless the ballyhoo publicity which has surrounded it is quickly corrected, public confidence will be badly shaken and the dental profession is due for an embarrassing headache.

The research to date seems to be sound. The clinical results have been repeated by several investigators and the statistical evidence points to a substantial degree of protection from the topical application of sodium fluoride. The difficulties that arise are due to the manner in which the information has been presented to the public. The carefully worded statements of research workers have been distorted and misstated so that most people received the impression that this new procedure is a cure-all for dental ills.

An opinion survey conducted among school teachers, health workers, one school, several clerks and stenographers indicates that except for minor differences, they have the following understanding about the topical application of fluorine. (1) The technique involved is so simple it requires no special ability, (2) it only takes a few minutes, (3) it prevents tooth decay indefinitely, (4) children need not visit the dentist for three years after the treatment, (5) it is probably good for adults too, (6) a mouth wash will soon be developed.

Each one of these beliefs is unwarranted by the following facts:

1. The technique is not simple. Dentists know how difficult it is to maintain a dry field in a young child who has a shallow lingual floor, for five minutes.

2. It takes time. No cleansing can be done in less than 15 minutes. A thorough prophylaxis, especially if green stain is present, requires considerably more than 15 minutes. The blocking off and drying of a quadrant cannot be done in less than two min-

utes; the solution is expected to remain on the teeth for 5 minutes; a total of 7 minutes per quadrant or 28 minutes for the mouth. Add to this 15 minutes for cleansing of the teeth, a few minutes to wash the hands and prepare the patient, and the first visit cannot be less than 45 minutes of chair time. The teeth do not require cleansing again during the subsequent three visits so that only 28 minutes for each visit needs to be allowed. With no allowance for the time required to apply the solution, and including only the most perfunctory cleansing, the series of treatments must take a minimum of two hours and seven minutes.

3. It does not prevent all tooth decay. Under experimental conditions and among large groups of children approximately 40 percent less new caries occurred in treated teeth.

The dentist may well ask himself if a mother will be satisfied with a post facto explanation that her particular child, who has developed three carious teeth would have developed five carious teeth if treatment were not given.

4. Children are not protected for three years. Research workers say that the forty-percent protective qualities of topical applications seems to be effective for three years. The corollary of a forty percent success is sixty percent failure. Little mention has been made of the sixty percent susceptibility which is ever present after treatment. Only the expected success is remembered by the patient.

5. No responsible research worker has claimed that the treatment is effective in adults.

6. All evidence points to the fact that home medication with sodium fluoride tooth pastes, mouth washes and tablets is valueless for the prevention of dental caries.

This lack of information will inevitably lead to patient-dentist misunderstanding.



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Editorials

INSURANCE CONSCIOUS

In days gone by if a man cut his foot while working in a factory, he felt sorry for himself but that was all he could do about it, but now the Workmen's Compensation Board steps into the picture and there is much he can do about even simple accidents. Now, people are being urged to purchase insurance policies covering about every type of accident as well as loss of property or personal belongings, with the result that our people are becoming insurance conscious and, at the slightest provocation, think in terms of compensation from someone.

All this adds up to a problem in dental practice which should not be overlooked by any dentist. A dentist is very foolish not to carry insurance against malpractice suits. Undoubtedly, the ideal would be to have national coverage and we would have it if some of our larger provinces were prepared to co-operate.

Two incidents have recently come to the writer's attention which illustrate this problem. A Winnipeg dentist was adjusting some bite blocks for full upper and lower dentures. He had heated some staples to lock the blocks together and, while inserting one of these staples, touched the lip of the patient, causing a very slight burn, one that you had to look for to find. However, the patient threatened suit and the insurance company settled for one hundred dollars, much to the disgust of the dentist. The company told the dentist that his feelings did not enter into the picture, that it was purely a business transaction and that they preferred to settle out of court.

The other case is of a Vancouver dentist who was treating a hypersen-

sitive tooth with silver nitrate and accidentally touched the lip with the nitrate. In a few minutes the lip began to swell up and the patient became alarmed and even the dentist was concerned, but told the patient all would be well very soon. About a week later she demanded compensation and the insurance company settled for sixty dollars. The company stated that the claimant alleged a difficulty in eating and sleeping, resulting from the injury, that her lip turned a black colour and she was unable to attend any social functions on account of her appearance. The company also consulted its medical adviser who stated that, this being a chemical burn, it might take a long time to heal and as long as a month to clear up, that such a burn would be extremely painful.

Upon receiving these particulars and never having heard of silver nitrate causing any such disturbance, I appealed to our busy C.D.A. Secretary, Dr. Gullett, to obtain some information from some department in the University of Toronto. He consulted a number of clinicians connected with the University, including the Department of Pharmacology. In no case was anyone able to account for the swelling which is said to have developed a few minutes after the nitrate touched the lip. All were surprised that such a reaction should have occurred. The head of the Department of Pharmacology could find nothing in the literature bearing on this subject, but stated that while he had never heard of such a case that it might be possible in the case of a woman who might be sensitized to silver from using some silver preparation for some purpose such as hair-dyeing.

Under the circumstances, it is hard to see how this woman was entitled to damages but it isn't hard to see that in these days it is very wise for a dentist to carry insurance against accidents, real or imaginary, which may be associated with the practice of his profession.

It does not seem to this writer that it is in the interests of our profession to have our patients seek damages for the slightest accident or inconvenience and it would appear obvious, also, that the way these problems are settled in one province is a matter of real concern to every other province, hence some national organization might well be considered.

M. H. G.

MRS. M. H. GARVIN PASSES AWAY

by T. R. MARSHALL, Assistant Editor

The sympathy of many friends and colleagues is extended to Dr. Harry Garvin, Editor-in-chief of this Journal, on the death of his dear wife on August the eleventh, after a lingering illness. Mrs. Garvin was a familiar figure at dental meetings because of her great interest in her husband's profession and his work. She was a woman of culture, talent, education and ability. She had travelled quite a little, which gave her experience and knowledge of people. This background, coupled with her willingness to be helpful, was of great assistance to her husband in the editorial work of this Journal for so many years, relieving him of many time consuming duties.

Mrs. Garvin had many friends because of her gentleness, kindness and her genuine and hospitable nature. It was a privilege indeed to be entertained in her home because it reflected a depth of living not often encountered. It was a home enriched by religious conviction and experience. When you came away you felt you had been buoyed up in an atmosphere of devotion, of beauty which was unpretentious and of friendliness for its own sake.

Dr. and Mrs. Garvin have had many years of happiness and comradeship together, all of which leaves many happy memories. Their many friends hope and pray that these memories will give some comfort to one who has been so affectionately loyal and who now suffers deep sorrow that the partnership is broken.

BOOK REVIEWS

Surgical Pathology of the Mouth, by E. Wilfred Fish, C.B.E., M.D., Ch.B., I.D.S., (Manch.), D.D.Sc. (Melb.), D.Sc. (Lond.), F.D.S.R.C.S. (Eng.). Dental Surgeon St. Mary's Hospital, London; Late Dental Surgeon, Royal Dental Hospital, London; Hon. Research Associate in Physiology, Univ. College, London; External Examiner in Oral Anatomy and Physiology, Univ. of Durham; Late Examiner in Dental Surgery and Pathology, University of Manchester. (From the Meyerstein Laboratory of Dental Research, St. Mary's Hospital, Paddington, London). 463 pages, 236 illustrations. Published by Sir Isaac Pitman & Sons, Ltd., London, England. Price, 50/-net.

From the fact that this book is written by the President of the British Dental Association and a man of international reputation it should find a place in the library of every thinking dentist. It is a scholarly and detailed work on Dental Pathology the fruits of many years of careful study and of critical observation; to use the author's own words it is "the story of general pathology as a dental man might see it." Dr. Fish contends that pathology has been too much taught from the general or medical side; that dental science has suffered for lack of the close relationship with the general sciences upon which the art of surgical intervention can alone be founded.

Cell growth, Chemotherapy, Pathology of Bone, Cementum, the Pulpless Tooth, the Mucosa, Periodontal Tissue and Enamel are carefully studied, and four chapters are given to the consideration of Neoplasia and Tumours. The colour plates, roentgenograms,

photographs and line drawings used for illustration are particularly fine.

Dr. Fish has this to say about the interesting and debatable subject of reattachment in discussing the treatment of a periodontal pocket: "It is important to determine what shall be the precise definition of 'reattachment' and it might clarify the issue if we were to speak of 'keratinous' reattachment and 'fibrous' reattachment. The former may be theoretically and precariously possible if curettage be thorough and persistent enough, but the latter can only take place if new periodontal fibres can be formed above the last remaining one of the old series. For this to happen not only would new fibres have to be formed, and perhaps new bone to secure their distal ends, but these fibres would have to *replace the down growth of epithelium* in order to become reattached to the tooth. For this to be possible it is necessary: (1) to reduce all inflammation in the area; (2) to remove the existing down-growth of epithelium surgically; (3) to maintain apposition of the parts during healing; (4) to maintain asepsis of the area for some weeks while osteoclasts prepare the denuded surface of the dentine and new cementoblasts build in the new periodontal fibres. It would therefore be a more delicate and precise technique than mere curettage oft repeated, but there is no pathological reason why a competent dental surgeon should not attempt it with the aid of penicillin. There are plenty of practical difficulties to prevent his succeeding."

Dr. Fish has this to say also about Vincent's Infection: "There is no doubt that many den-

tal surgeons have regarded this disease as infectious and gone to great lengths in isolating the sufferers and sterilizing their food utensils. On the other hand many practitioners (including the author) do not impose any restrictions on the patient, and it has not happened in any case of the many hundreds which have come under observation that a second member of the family has developed the disease. This reviewer agrees that this disease is not particularly infectious and therefore places few restrictions upon the patient from this angle.

This book is unique in that it is the first of its kind and should prove most interesting and helpful since it combines so much practical experience with so much careful scholarship.

M. H. G.

Practical Dental Assisting, by John Oppie McCall, D.D.S., F.A.C.D., Former Director of the Murry and Leonie Guggenheim Dental Clinic and School for Dental Hygienists; Former Professor of Periodontia, N. Y. Univ. College of Dentistry; Consultant to the Dental Service, N.Y. Hospital; Associate in Public Health and Preventive Medicine, Cornell Univ. College of Medicine. 44 illustrations. 102 pages. Published by Dental Items of Interest Publishing Company, Brooklyn, New York. Price, \$3.75.

The very large percentage of young women who begin their career as a dental assistant do so with no previous training. This book is written for such assistants but as it contains a wealth of technical information it is well deserving of the perusal of any dental assistant no matter how much experience she has had. The new dental assistant might well spend a day or two in mastering this book before assuming her daily duties in the office or it could be studied in the evenings, thus relieving the dentist of explaining a large number of technical terms and procedures and he can then devote his training to the problem of explaining his own special methods.

The following subjects are discussed, "Deciduous and Permanent Teeth," "Caries, Pedodontics, Orthodontics and Periodontics;"

"Microorganisms;" "Infection;" "Instruments and Appliances;" "Filling Materials;" "Laboratory Materials and Appliances;" "Roentgenology;" "Medicaments;" "Daily Office Routine;" "Good Will and Professional Conduct;" and "Glossary." The glossary provides brief definitions of a large number of terms which the assistant will encounter in the course of her duties.

The book is written for the one assistant one operator office which covers the situation in the very large majority of cases where an assistant is employed although the ideal set-up for a one operator office is for at least two assistants, however in this case the duties enumerated can be allocated by local agreement and planning.

The author emphasizes the recall system as one of the assistant's important responsibilities. In this connection it is stated that it is usually best to have an understanding with the patient at the time the work is completed. This reviewer would say that such an understanding should invariably be had. It is further stated that when the notice is sent out it should include a definite appointment with the request that if the time is not convenient the patient telephone and make another appointment. This reviewer believes that these contacts should always be made by telephone and in cases where there is no telephone that a notice be sent requesting that an appointment be arranged but that no definite time be set since the patient may be a thousand miles away or out of this world altogether which means that all appointments made in this way must be counter checked in some way. However we are in thorough accord with most of the advice given in this splendid book, printed on fine heavy coated paper and written by a man of international reputation.

This book should find a place in every dental office where an assistant is employed and also in those offices where no assistant is employed since if the dentists in this latter group would study this text they would surely see the wisdom of employing at least one assistant.

M. H. G.

Except a living man there is nothing more wonderful than a book! a message to us from the dead—from human souls we never saw, who lived, perhaps thousands of miles away. And yet these, in those little sheets of paper, speak to us, arouse us, terrify us, teach us, comfort us, open their hearts to us as brothers.—Charles Kingsley.

ROYAL CANADIAN DENTAL CORPS NEWS

Lt.-Col. W. G. Dawson, Halifax, N.S., Officer Commanding No. 5 Coy R.C.D.C. (R.F.) and Major Frank Smith, Vancouver, B.C., Vice-Lt.-Col. H. A. Simmons, E.D., Officer Commanding No. 8 Coy R.C.D.C. (R.F.) took advantage of the opportunity authorized by A.H.Q. to visit the R.C.D.C. School at Ottawa.

Lt.-Col. L. E. Kent, M.B.E., Lachine, P.Q., has been succeeded by Lt.-Col. K. C. Berwick, Montreal, P.Q., as Officer Commanding No. 3 Coy R.C.D.C. (R.F.).

Lt.-Col. G. L. Frawley, E.D., Toronto, Ontario, assumed command of No. 2 Coy R.C.D.C. (R.F.) on the resignation of Lt.-Col. L. A. Kilburn who has been transferred from Hamilton to Ottawa, Ontario, as Director of the Dental Division, Department of Veterans' Affairs.

Major H. L. Harris, who was stationed on the West Coast for the last two and a half years, has recently been posted to N.D.H.Q., Ottawa, as Assistant Director Dental Services.

NEWS FROM THE PROVINCES

ONTARIO

Excerpts from Toronto Board of Trade Publication

*Directives from Deputy Minister of Taxation
Directive No. 203, dated July 8, 1948:*

"By virtue of Section 5(1) (cc) of the Income War Tax as amended, a taxpayer who has attained the age of sixty-five years before the end of the taxation year, is entitled to a \$500 deduction from income in addition to present deductions.

Assessments—Convention Expenses of Medical Profession

Directive No. 205, dated July 12, 1948:

"Effective 1st January, 1948, the reasonable expenses incurred by members of the medical profession in attending the following Medical Conventions will be admitted for Income Tax purposes against income from professional fees:

1. One Convention per year of the Canadian Medical Association.
2. One Convention per year of either a Provincial Medical Association or a Provincial Division of the Canadian Medical Association.
3. One Convention per year of a Medical Society or Association of Specialists in Canada or the United States of America.

"The expenses to be allowed must be reasonable and must be properly substantiated; e.g. the taxpayer should show (1) dates of the Convention, (2) the number of days present, with proof of claim supported by a certificate of attendance issued by the organization sponsoring the meetings, (3) the expenses incurred, segregating between (a) transportation

expenses, (b) meals and (c) hotel expenses, for which vouchers should be obtained and kept available for inspection.

"None of the above expenses will be allowed against income received by way of salary since such deductions are expressly disallowed by statute."

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Dr. Frank Martin Honoured in I.C.D.

It has been recently announced that Dr. Martin was elected a Fellow of the International College of Dentists, which Fellowship was presented in Chicago early this month. Dr. Martin is presently Associate in Dentistry in the Clinical Department of the Faculty of Dentistry, University of Toronto. He was graduated in 1923 after serving in the C.A.D.C. overseas from 1915 to 1919. He joined the Faculty of Dentistry in 1936 as a member of the staff in Prosthodontia. He was President of the Toronto Academy of Dentistry in 1934-35 and President of the Ontario Dental Association in 1945-46. He was President of the Canadian Oral Prophylactic Association for four years. "Frank" as he is known so well to many of his associates has made many fine contributions to Dentistry and this honour is well deserved.

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Dentist Heads Petrolia Lions Club

Dr. E. W. Duncan has been elected President of the Petrolia Lion's Club having been a charter member, a former secretary and having been active on various committees with special interest in child welfare, civic improvement and children's playground and sports activities.

BRITISH COLUMBIA

Social Security and Municipal Aid Tax Act

The Province of British Columbia at its last session enacted the Social Security and Municipal Aid Tax Act which went into effect July 1, 1948.

This tax requires purchasers to pay a tax of 3 per cent on the retail purchase price of property purchased for consumption or use.

The following are among the items exempted from the tax:—(1) Medicaments sold on prescription, artificial limbs and other appliances and equipment for cripples and chronic invalids, hearing aids, dentures and dental and optical appliances sold on prescription.

A Trip Through B.C.

Travelling through a considerable portion of the Province of British Columbia on a vacation trip, one is struck by the remarkable distribution of the dental population. In the southern fifth of the Province, south of a line drawn from East to West about the level of Revelstoke, about four hundred and fifty dentists serve the people in an area of about eighty thousand square miles. North of this line, serving an area of over a quarter of a million square miles, are just fourteen dentists.

It is obvious, of course, that the great mass of our population is concentrated in the southern areas; on Vancouver Island, on the lower mainland, and in the Okanagan and Kootenay valleys. However, there would appear to be a great field for service yet in many parts of the southern interior, as well as in the great northern areas of the Province.

The unparalleled demand for dental services of the past few years has been responsible for the fact that almost all of those who have come to join the profession recently have established their practices in the larger cities, as being more desirable locations in which to live.

As we travel through the beautiful and prosperous Okanagan Valley; the wide range

and park-like regions of the Cariboo; the thriving lumbering and mining centres of the Kootenays and many other areas of the Province, we sometimes wonder why most of us persist in living in the crowded centres of humanity.

Here in the great heart of British Columbia should be living at its best—giving service where it is urgently needed, coupled with a life richly endowed with all that Nature has to offer. Here may be found freedom from the never ending bustle and turmoil of city life; excellent recreational facilities almost at one's doorstep; fishing and hunting beyond description, and scenery changing spectacularly with each few miles of travel. Nor are the amenities of so-called civilization absent in the larger centres of population in these outlying districts, for we find excellent shopping facilities, good schools, hospitals and libraries, and many other conveniences that we commonly consider necessary to a normal existence.

The present degree of prosperity is exceptional in the light of our past history. It may not continue for long, and if conditions such as we experienced in the early thirties should return, those who have established themselves in the life of the lesser centres of population may well be in a position to congratulate themselves on their foresight and security. L.G.R.

Dr. Johnson will be Missed

Doctor Archie Johnson, of Vancouver, who died recently, will be missed among members of the profession, as well as in a great circle of personal friends throughout the country.

Additions to Dental Personnel

Doctor Epp, of Vancouver, and Doctor Frank, of Trail have recently resumed practice, and fourteen additions have been added to the register of the College of Dental Surgeons of British Columbia. Twelve of these men have established their practices in the metropolitan areas, one at Nelson, and one at Prince George.

There are surgeons who operate on the canine principle of savage attack, and the biting and tearing of tissues are terrible to witness. There are surgeons who believe in the light hand, who use the utmost gentleness, and who deal lovingly with every tissue they touch. In some hands the scalpel is a royal sceptre, in others, but a rude mattock. The perfect surgeon must have the heart of a lion and the hand of a lady: never the claws of a lion and the heart of a sheep.—Sir Berkley Moynihan, F.R.C.S.

EMPIRE NEWS

GREAT BRITAIN

Fellowship in Dental Surgery

Two interesting ceremonies were held at the Royal College of Surgeons of England on July 16 and July 28 when several distinguished dental surgeons from overseas and from this country were admitted to the Fellowship in Dental Surgery. After signing a declaration of allegiance to the College, and promising to obey the Bye-Laws, the recipients of the Fellowship were introduced to the President of the College, Lord Webb-Johnson, by the Dean of the Faculty, Professor R. V. Bradlaw. The Dean gave a brief outline of the distinctions which each had attained, and then the president made a few complimentary remarks to each when handing them their Diploma of Fellowship. Both ceremonies took place in the Lecture Theatre of the College and were

watched by a large audience. The following received the Fellowship:—

16th July, 1948.

Professor Andrew Francis Jackson of Philadelphia.

Professor Sheldon Friel, of Dublin.

Miss K. C. Smyth, of London.

Mr. L. Russell Marsh, of London.

Mr. B. Maxwell Stephens, of London.

Professor J. C. Middleton Shaw, of Johannesburg.

28th July, 1948.

Dr. Daniel F. Lynch, of Washington.

Dr. Malcolm Wallace Carr, of New York.

Professor Roy G. Ellis, of Toronto.

Mr. J. A. Ogden, of London.

In the evening on both occasions, a dinner was given by the Faculty to the new Fellows at which distinguished company was present.

GENERAL NEWS

Wisconsin Takes Steps to Train Dental Assistants

The Dental Education Committee of the Wisconsin State Dental Society is planning a course of training for dental assistants.

The plan calls for a three months' course with classes during the evening twice a week. It will be given in Milwaukee starting in January and, if popular, will be expanded to a more complete program later.

Dr. L. A. Kilburn Appointed Director D.V.A. Dental Service

Hon. Milton F. Gregg, V.C., Minister of Veterans Affairs has announced that Dr. L. A. Kilburn has been appointed Director of Dental Services for the Department of Veterans Affairs. He will be attached to head office. Dr. Kilburn has previously been District Supervising Dentist at the Hamilton office of the Department.

A veteran of both world wars, Dr. Kilburn enlisted in the 9th Siege Battery in World War I, and served in Great Britain, France and Belgium. On his discharge from that war he entered the University of Toronto where he studied dentistry.

For a number of years, in addition to his

private practice he was part-time dental surgeon with the old Department of Soldiers Civil Reestablishment, and he carried on with his work after the Department of Pensions and National Health was set up.

A native of Fredericton, N.B., Dr. Kilburn has lived in Ontario since soon after his discharge in World War I.

New Caries Hypothesis

Summary of paper in Tandlaegebladet

A new caries-hypothesis is proposed: The caries lesion is not a simple acid decalcification and removal of the inorganic salts, but rather a pathologic, enzymatic action caused by general disturbances of the phosphorus metabolism and by local, abnormal accumulation of phosphatase in suspect areas.

This hypothesis is supported by the following facts:

- (1) The organic matter of the enamel is first attacked, not the inorganic.
- (2) An accumulation of phosphatase in initial carious lesions can be observed.
- (3) The specific phosphatase inhibiting fluorides are able to prevent caries.
- (4) The phosphatase-activating cadmium accelerates caries.

- (5) Organic phosphorus has a preventive effect in caries.
- (6) A diet poor in phosphorus, promotes caries in rats and hamsters.
- (7) Excess of organic phosphorus, calculus-formation and caries-resistance mostly go together.

Art Exhibit

The First District Dental Society of New York has held a most successful art showing. Working at odd times these men and women produced paintings, sculptures, books, jewelry and other objects of art that would do justice to professional artists.

This was the first show held by the Society and a tremendous store of artistic ability was found. It is planned to hold succeeding exhibits.

Fifth Annual Seminar for the Study and Practice of Dental Medicine

Research vs. the high cost of eating will be demonstrated by actual experiment when experts in medical dentistry and allied professions congregate for the Fifth Annual Seminar of Medical Dentistry at the Desert Inn, Palm Springs, California, October 17-22, 1948.

Dr. Michael Walsh, national authority on nutrition and diet, will conduct special sessions and demonstrations on Nutrition in Action designed to show the practical mechanisms for putting nutrition into action at the community level.

Special menus created from recipes prescribed by Dr. Walsh will be featured at all meals of the Seminar and will include a variety of breads, experimentally made to evaluate the difference between the "conventional" mass-produced breads and "custom-made" breads made from freshly ground whole grains without the addition of sugars, molasses or honey.

Sea foods and special meats will be prepared and served in such a manner as to demonstrate how appetizingly they can be used as major dishes while furnishing excellent nutrients to the diet.

President of the Seminar is Dr. Hermann Becks, professor of dental medicine at the University of California. Other outstanding lecturers scheduled include:

Lt. Colonel Joseph L. Bernier, D.D.S., M.S., of the Army Medical Museum, Washington,

D.C., Dr. Stafford L. Warren, first Dean of the new Medical School of the University of California, Dr. George W. Beadle, Professor of Biology and Chairman of the Division, California Institute of Technology, Dr. Paul Popenoe, Director of the American Institute of Family Relations in Los Angeles, Lt. Commander Carl A. Schlack, D.D.S., head of the Dental Branch of the Medical Sciences Division, Office of Naval Research, Washington, D. C., Warren L. Bostick, M.D., Assistant Professor of Pathology at the University of California, and Dr. Charles H. M. Williams, Associate Professor of Periodontics at the University of Toronto.

A.D.A. Convention

The 89th session of the American Dental Association, to be held in Chicago from September 13 to 17 is expected to be one of the largest in the Association's history.

With several thousand from the Chicago area expected to attend, total registration is expected to range between 12 to 15 thousand for the five-day meeting.

More than 125 research authorities, private practitioners, teachers and scientists have been booked as essayists for the eleven scientific sections which will be held on Sept. 14, 15 and 16. All scientific section meetings will be held at the Stevens Hotel with the exception on hospital dental service which will be conducted in the oral surgery amphitheatre of the University of Illinois College of Dentistry.

Meeting immediately prior to or simultaneously with the Association will be a score of allied or associated dental organizations including various specialty groups, the American College of Dentists, the International College of Dentists, the Association of American Women Dentists, the American Dental Assistants' Association and the American Dental Hygienists' Association.

American Academy of Pedodontics

The By-laws of this Academy state that the annual dues for active membership shall be seventy-five dollars and the sum of fifty-five dollars shall be reimbursed to each member maintaining a seventy-five per cent attendance at the scientific and business sessions of the regular annual meeting of the Academy.

Two Dentists Honoured by Dominion

The Hon. Paul Martin, Minister of National Health and Welfare has announced the appointment of Dr. H. K. Brown of Ottawa, formerly of Edmonton to head the Dental Section of the Department of National Health and Welfare and the appointment of Dr. H. R. McLaren of Windsor, Ont., to the dental health staff.

Dr. Brown has been acting chief of the division since the resignation of Dr. L. V. Janes last year. Dr. McLaren was formerly dental officer for the Windsor Board of Health.

Both of these men hold diplomas in dental public health.

A.D.A. Spokesman Urges Congress to Establish Civilian Board to Recruit Dentists for Armed Forces

Creation of a civilian authority similar to the former Procurement and Assignment Service which would be in charge of recruiting dentists for the Armed Forces as needed was recommended to Congress on April 20, by Dr. Carl O. Flagstad of Minneapolis, chairman of the A.D.A. Committee on Legislation.

The A.D.A. spokesman urged that the proposed procurement board be made directly responsible to the President of the United States and that it be given authority by law to secure dentists to serve as officers in the Dental Corps. He also urged that Congress make provision for the autonomous direction of dental activities by the Dental Corps.

Dr. Flagstad also urged that dental students and a "reasonable pool of pre-dental students be deferred so as to assure a normal class of dental students in the coming years."

Dentistry and the Public Viewpoint

Dentists must realize that the public does have a stake in the practice of dentistry, and they must learn to respect the public's viewpoint. Actually, the public in most States has supported dental legislation rather well, realizing that we as dentists have been acting in the interest of public welfare as well as the profession's welfare. That relationship is a thing to treasure. Before we join organizations to fight public opinion emotionally, perhaps we should stop and consider an alternative, the presentation of conclusions to the

public on the basis of obvious, hard, cold, objective data which no one can deny.

Finally, we must recall that probably one of the hardest laws of nature still operates — there is no surer road to extermination of the human organism than failure to adapt to a changing environment. It is doubtful if dentistry can long maintain its position as an independent health profession in a security-minded nation and supply its services only to 20 or 30 per cent of the people.

If 140 million people seriously demand a broader distribution of good oral health care in this country, 70,000 dentists can only offer futile resistance to the social changes which appear certain during the next few decades. But 70,000 scientific, thoroughly informed cooperative dentists can do much to direct productively the changes which may affect the practice of the profession.

Kenneth Easlick, Illinois Dental J., February, 1948, per *Public Health Economics*.

Canadian Dentists at Illinois

Dr. A. L. Posen, Toronto, Ont., and Capt. Charles Craig of Vancouver, B.C., have been selected by the University of Illinois College of Dentistry for graduate work in the field of orthodontia in an 18-month course starting this fall.

American College of Surgeons Approves Use of Nurse Anaesthetists

The Board of Regents of the American College of Surgeons, at a meeting on February 22, 1948, adopted a resolution commending the services of nurses who have had special training in the administration of anaesthesia and recommending the continuance of training courses in this field for nurses.

Dr. Rappleye Urges Group Practice

The medical profession must increasingly organize itself to participate in community efforts in the development of sound health and medical services, Dr. Willard C. Rappleye, dean of Columbia University's Faculty of Medicine, declared May 10.

The American public is aroused and is demanding better medical and health service for every element of the population, regardless of economic status or geographic location. The country is convinced of the value of adequate

medical care as a part of the national economy. It is also becoming increasingly clear that medical practice is not only a private pursuit but a community responsibility.

The medical profession, Dean Rappleye noted, could develop community responsibility through hospitals, outpatient departments, health insurance groups, group practice, health centres, home nursing care, rehabilitation programs, nutrition, social service and workmen's compensation. "It is well known that present-day knowledge regarding the prevention, diag-

nosis and treatment of disease is far in advance of its application in community medical services and medical practice," Dean Rappleye said. "The present wide gap or lag can only be narrowed through a more satisfactory organization of medical service and practice largely on the part of the profession itself. Medicine must fully take the public into its confidence in regard to the value as well as the difficulties of making modern medical services available to the entire population."—*Public Health Economics*.

A great deal of the joy of life consists in doing perfectly, or at least to the best of one's ability, everything which he attempts to do. There is a sense of satisfaction, a pride in surveying such a work—a work which is rounded, full, exact, complete in all its parts—which the superficial man, who leaves his work in a slovenly, slipshod, half-finished condition, can never know. It is this conscientious completeness which turns work into art. The smallest thing, well done, becomes artistic.—William Mathews.

Individualism has done so much in the past that were it to be extinguished either by the State, by easy living, by regulated hours, or indeed regulations of any kind, or by too much insistence upon plans and planning, then the future changes in the face of medicine will never reach the same heights of achievement as in the past.—Sir Lionel Whitby, C.V.O., M.C., M.D., F.R.C.P. in Br. Med. Jour.

IN MEMORIAM

Peter Healy, of Toronto, Ontario, aged 66, died suddenly in his office on August 4, from a coronary thrombosis. He was graduated from the Royal College of Dental Surgeons of Ontario in 1910. Following graduation he established a practice in Calgary, Alta. Enlisting in the First Great War, he served overseas as an officer in the Canadian Dental Corps.

Following the war he opened an office in Toronto. He was a keen golfer and a member of the Lakeview Golf Club. He was also a member of Holy Rosary Church and the Holy Name Society.

Dr. Healy is survived by his widow, a son, two sisters and two brothers.

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Charles A. Raver, of Edmonton, Alberta, aged 79, died June 23.

Dr. Raver was graduated from the Chicago College of Dental Surgery in 1897. He prac-

tised dentistry in Tekamah, Nebraska, U.S.A., until 1914, when he moved to Canada. In the year 1916, he opened an office in the McLeod Building in Edmonton, Alberta, where he continued to practice until March, 1948.

He was well known throughout northern Alberta where he had many friends and patients outside the city.

Dr. Raver is survived by his widow and three daughters.

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James Lawrence Crary Wadsworth, of Simcoe, Ontario, aged 74, died suddenly on July 25. He was graduated from the Royal College of Dental Surgeons of Ontario and practiced in Simcoe until his retirement in 1933. He was a member of St. Paul's Presbyterian Church.

Dr. Wadsworth is survived by his widow, and one daughter.

Le Journal

DE L'ASSOCIATION DENTAIRE CANADIENNE

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No 9

Nouvelle médication servant à coiffer, avec succès, les pulpes blessées des dents permanentes

par J. ARTHUR RENAUD, D.D.S., Montréal, Qué.

Professeur titulaire de pré-clinique de dentisterie opératoire, Université de Montréal

Tous savent que, dans le passé, il était peu recommandé de coiffer une pulpe blessée des dents des adultes. Ceux qui ont tenté de le faire n'ont pas toujours eu le succès désiré, même en y apportant toutes les précautions nécessaires à cette fin, telles: l'ablation parfaite de la carie, l'aseptie indispensable, et la mise en place, sans compression, de la substance antiseptique tolérée par les tissus de la pulpe. Les cas réfractaires à ce genre d'intervention sont restés si nombreux jusqu'à date que pas un auteur n'a osé établir un pourcentage de succès raisonnable. Il est, au contraire, connu de tous que les tentatives de coiffage de la pulpe faites sur les dents des enfants sont plutôt encourageantes, compte tenu, il va sans dire, des facteurs mentionnés plus haut, qui favorisent la guérison de la pulpe lacérée et la calcification de la dentine secondaire ou néo-dentinaire.

Inutile de rappeler nos insuccès sur les dents de patients dépassant un certain âge, je dirai la quinzaine. Il n'est pas étonnant de constater que plusieurs aient perdu confiance en ce genre de traitement conservateur de la pulpe et qu'ils aient eu recours, en définitive, à l'extraction.

Fort heureusement pour nous, des dentistes français d'outremer, auxquels il faut ajouter ceux de la Suisse, se sont mis à expérimenter depuis quelques années,

une nouvelle médication qui favoriserait incontestablement la régénérescence dentinaire au dessus d'une pulpe blessée, et ce, chez les patients de tous âges. Cette médication serait le Citronellol et les Sulfamidés.

Ayant été un jour désigné par le président de la Société d'Endodontie de Montréal, pour présenter un travail sur les coiffages de pulpe, j'eus la bonne fortune de mettre la main sur une revue française récente d'outremer, grâce à mon bon ami, le Docteur Gérard de Montigny, à qui j'avais parlé de la chose. "Mon cher docteur," m'a-t-il répondu avec empressement, "quelle heureuse coïncidence; j'ai du nouveau sur ce sujet et je vous l'apporterai sans tarder." Et de fait, il m'arrivait, le lendemain, avec la Revue Odontologique. J'y trouvai en effet une communication présentée par le Docteur Macler à la Société Odontologique de France, à sa séance du 28 octobre 1947. Cette communication s'intitulait "Régénérescence de la paroi pulpaire au traitement bactériostatique". Je ne pouvais mieux frapper. J'eus donc le plaisir de rapporter, pour la première fois, devant un auditoire en majorité anglais ce soir-là, et dans leur langue, un nouveau traitement conservateur de la pulpe, les exhortant, à la fin, de ne pas abuser de leur spécialité, par ces paroles:

"Je refuse de croire que chez les adultes une pulpe encore vivante doit être considérée comme un organe superflu, inutile, du fait qu'il a atteint sa maturité."

La principale raison de cet article est de propager ce nouveau traitement conservateur de la pulpe, en m'adressant, cette fois, aux miens, convaincu moi-même de son efficacité par de nombreuses expériences entreprises récemment à la clinique de la Faculté de Chirurgie Dentaire de l'Université de Montréal.

Je vous préviens que je serai obligé de citer longuement des extraits de la conférence du Docteur Macler, voulant simplement servir d'intermédiaire.

Je puis vous assurer que ce traitement conservateur de la pulpe a de grandes possibilités de guérison, s'il m'est permis de juger par mes expériences en cours. Rien n'empêche quiconque de le modifier en y apportant du nouveau dans la technique, pourvu qu'on s'en tienne à une rigoureuse asepsie et à une observation minutieuse des cas.

Je résume maintenant la communication du Docteur Macler. Il commence sa conférence en mettant en garde son auditoire sur ses intentions qui ne sont pas de définir une méthode toute de nouveauté ou qui présenterait l'avantage d'une précision mécanique et systématique. "Je vous expose simplement des expériences que je me suis efforcé de répéter et d'observer aussi scrupuleusement qu'il était en mon pouvoir. Puisseons-nous en tirer quelques conclusions fructueuses, aussi modestes soient-elles."

Ensuite il donne ses raisons qui le portent, comme d'autres, à s'intéresser à cette question. C'est alors qu'il rapporte que le Docteur Bernard, en 1937, fit une conférence au cours de laquelle il décrit comment avec le Citronellol (chimiquement pur) il avait obtenu, d'abord accidentellement, puis systématiquement, les succès qu'il soumettait alors. "Vous dire, non pas l'indifférence, mais le scepticisme, avec lequel on accueillait généralement cette communication, s'explique par le dogme péremptoire de la dépulpation alors tellement en vigueur."

Et le Docteur Macler continue en rapportant une autre brillante conférence du Docteur Marmasse sur le même sujet. "Les résultats personnels qu'il a publiés ne manqueront pas de gagner à cette thérapeutique nos confrères encore boudeurs."

"Pour ma part, après avoir depuis quinze ans coiffé des pulpes comme tout le monde avec de la pâte oxyde de zinc eugénol, en évitant toute compression, j'ai obtenu des résultats assez bons, mais tout de même avec une incertitude gênante, les échecs restant encore nombreux chaque fois que la plaie était trop large."

"Les sulfamidés me permirent ensuite un progrès sensible dans cette voie, en employant, en janvier 1946, comme coiffage, simplement une pâte oxyde de zinc, plus sulfamidé-en poudre, plus eugénol."

"Une nouvelle modification me permettait enfin de coiffer des lésions plus étendues ou plus délicates. Elle consistait, après un nettoyage minutieux de la cavité, à faire une hémostase soignée, à laver la plaie à l'eau oxygénée boratée, puis à l'alcool, et à dessécher à l'air tiède. Enfin, lorsqu'apparaissait le sérum sanguin à la surface de la pulpe, une pulvérisation de poudre sulfamidée venait la couvrir et la matelasser." Après quoi, la pâte mentionnée plus haut remplissait la cavité. Par ce procédé, plusieurs cas vérifiés par la suite lui prouvèrent que la pulpe pouvait se cicatriser.

Le Docteur Macler s'arrête un moment sur la question de la genèse des cicatrises, mais non pas avant de faire cette réflexion. "Si la question de la réformation de l'os du squelette est très avancée, celle de la réformation de la dentine en néo-dentine paraît très controversée."

J'avoue, tout de suite, avant de rapporter textuellement ce qui suit, que les chercheurs de quelques-uns d'entre nous, qui connaissent à fond leur embryologie dentaire, vont se dresser, en apprenant que les Docteurs Bernard et Retterer sont d'avis que "l'odontoblaste est cellule ectodermique et non plus mésodermique, comme le veulent les classiques."

L'argumentation est établie sur les quatre points suivants; et je cite:

- 1° Les odontoblastes se comportent comme les cellules nerveuses; elles ont dans les canalicules de l'ivoire des prolongements dentritiques ou cylindriques, conducteurs de la sensibilité; or, les cellules nerveuses sont d'origine ectodermique;
- 2° Ils sont disposés à la surface de la pulpe en couche périphérique que l'on qualifie de couche épithéloïde; on reconnaît donc déjà la similitude, premier pas vers l'identité;
- 3° Retterer qualifie les odontoblastes de cellules mésodermiques; mais il y a dans ses textes des contradictions qu'il convient de relever; il dit en effet: "Toute l'ébauche dentaire est un dérivé épithélial, mais la masse centrale dont il fait dériver les odontoblastes se transforme de bonne heure en tissu conjonctif." Mais alors! les odontoblastes ont donc bien une origine ectodermique; pourquoi leur attribuer un stade conjonctif puisque leur fonction et leur aspect demeurent ectodermiques?
- 4° Enfin, ce phénomène de régénérescence dentinaire, qui était exceptionnel jusqu'à ce jour, mais qui devient la règle si on ne l'entrave pas, ce phénomène de protection du conjonctif, qui n'est pas dans les usages mésodermiques, mais qui ressemble tant à la cicatrisation ectodermique, plaiderait, à lui seul, en faveur de la nature ectodermique des odontoblastes.

Les odontoblastes ont donc des caractères ectodermiques de par leur aspect et leurs fonctions; au cours de leur stade évolutif, on admet arbitrairement une certaine transformation mésodermique, mais leur origine est bien ectodermique, ce ne sont donc que des cellules ectodermiques.

Et Macler rapporte que, personnellement, il se rappelle que Retterer dans son cours parlait de l'origine mésodermique de l'odontoblaste, en ajoutant la remarque suivante: "disons cela pour faire plaisir aux classiques—en fait, ils n'en savent rien."

Il est aussi question de la greffe odontoblastique qui, selon le Docteur Bernard,

peut se faire par l'ensemencement au moyen de dentine prélevée sur les bords dentinaires. Par contre, d'après les classiques Suisses, la source de la cicatrisation néodontinaire n'est pas le fait des odontoblastes, "puisque l'odontoblaste ne peut être libre (c'est là le point important à débattre), engagé qu'il est dans la dentine par sa fibrille de Tomes. Et de déduire que toute greffe est impossible."

"La cicatrisation serait donc le fait d'autres cellules, issues du tissu pulpaire, les fibroblastes, comme le pense le Docteur Marmasse, et la dentine ainsi créée serait un tissu amorphe."

Puis suit "une troisième manière d'envisager les choses qui pourrait être risquée en cette matière." "Y a-t-il bien toujours spécificité cellulaire?" se demande le Docteur Macler. C'est alors qu'il rapporte "un doute" émis à la page 158 du chapitre "Les limites de la spécificité cellulaire" par le Professeur Delarue dans son ouvrage remarquable sur *La Biologie du Cancer*. Ainsi la pathogénie vient éclairer les mystères de la physiologie."

"Le Dr Delarue cite, entre autres exemples, celui de la cellule respiratoire formant le revêtement de l'alvéole pulmonaire où l'élément cellulaire paraît dérivé d'une souche épithéliale et se comporte en effet dans le poumon du fœtus comme un élément épithélial. Dès que, à la naissance, s'installe la fonction respiratoire, il prend la forme, les aptitudes, les fonctions d'une cellule conjonctive. Ces mêmes caractères de cellule conjonctive s'observent dans la plupart des réactions inflammatoires de l'alvéole pulmonaire. Mais que, par suite de modifications locales de la paroi alvéolaire, la fonction respiratoire soit supprimée dans la cavité aérienne qu'elle borde, la cellule alvéolaire reprend aussitôt le type épithélial. Ainsi l'aspect, la nature même peut-on dire, de cette cellule dépendent en somme de son adaptation aux fonctions qu'elle est appelée à remplir."

"Et il fait constater comment, dans certains cas, les métaplasies représentent une adaptation des tissus à des fonctions nouvelles, locales, régionales ou générales."

Le Docteur Macler déduit ou fait la

réflexion suivante, après avoir émis l'idée de doute sur la spécificité cellulaire et avoir apporté un premier jalon de preuve qu'il n'en est pas toujours ainsi—"nos cellules calcifiantes de la plaie pulpaire ne sont-elles pas troublées dans leur trophicité, et par là même, ne risqueraient-elles pas d'obéir à de semblables métamorphoses?"

"Cela devient même troublant, lorsque le Dr Loukomoski, de Moscou, nous dit classiquement: en cas de perte des odontoblastes dans certaines conditions, ils peuvent être remplacés par d'autres cellules de la pulpe."

N'insistons pas davantage comme le dit Macler, "d'autres plus compétents ne manqueront pas, je l'espère, de développer un sujet si riche qu'une longue conférence ne suffirait à l'épuiser."

"Quoiqu'il en soit, ajoute-t-il, nous cicatrisons les plaies pulpaires, ce fait n'est plus contestable."

Deux méthodes essentielles sont récapitulées brièvement dont l'une est du Docteur Bernard consistant en deux fermetures de la plaie:

- 1^o Fermeture par première intention: excision totale de la dentine ramollie et coiffage banal.
- 2^o Fermeture par deuxième intention: excision douteuse de la dentine ramollie par suite de la sensibilité, assèchement à l'air légèrement chaud et pose d'un premier pansement de Citrogenol, ou Citronellol (chimiquement pur). La dentine desséchée et infiltrée par le liquide antiseptique sera enlevée dans la séance suivante."

Les pansements sont renouvelées, s'il le faut, tous les huit à dix jours. La cicatrisation dans ce cas peut varier de huit jours à un mois.

L'autre est celle de la méthode Suisse, des professeurs Hess, Held et Muller, qui est une fermeture de la plaie par première intention—"exérèse parfaite de la dentine ramollie avec toutes les précautions possibles tendant à l'aseptie et pose avec délicatesse d'une pastille de Calxyl recouverte d'une pâte à l'oxyde de zinc à prise rapide. La cicatrisation peut varier entre trois à cinq mois."

Lorsqu'il y a pulpите persistante, l'amputation coronaire s'impose et le résultat reste excellent quant au coiffage des filets radiculaires.

Le Docteur Macler préfère, dans de nombreux cas, la méthode du Docteur Bernard, "qui laisse la porte ouverte à toute variation ultérieure de la thérapeutique et à toute évolution de la technique, en maintenant précieusement le principe d'un traitement surveillé, donc gouvernable."

Je ferai remarquer que le Docteur Macler, tout en se servant de la méthode du Docteur Bernard, qui est une obturation de la brèche pulpaire par seconde intention, emploie comme médicaments les sulfamidés liquides au lieu du Citronellol, à cause de l'impossibilité pour lui de s'en procurer, en imprégnant une petite boulette de coton stérile, maintenue au contact de la pulpe par un ciment fait d'oxyde de zinc eugénol à prise rapide. Ses essais furent faits d'abord sur des brèches petites. "Le succès fut souvent rapide et je constatais en effet qu'un opercule d'aspect blanchâtre et généralement concave, fragile au début, mais devenant d'une consistance semblable à la dentine voisine."

Les pulpalgies causées dans certains cas par la pose du ciment provisoire au dessus du pansement peuvent quelquefois durer de une à trois minutes pour cesser par la suite assez rapidement et ne plus revenir. "La guérison apparente de ces dents, leur vitalité ultérieure, m'ont confirmé qu'en dépit d'une compression légère, je n'avais pas nui à l'organe pulpaire."

Suit maintenant quelques détails opératoires que donne le Docteur Macler:

- 1^o Assurer un champ opératoire le plus propre possible:
 - pose de la digue, ou
 - pose soigneuse de rouleaux de coton, nettoyage des dents de l'hémi-maxillaire et badigeonnage des dents avec une solution antiseptique ou sulfamidée.
 - 2^o Exciser soigneusement toute dentine ramollie.
- J'ai pourtant tenté parfois la conserva-

tion de tissus douteux, dans le but de voir si une transformation favorable ne surviendrait pas. Des succès sont assez souvent observés.

3° Nettoyer la plaie avec de l'eau oxygénée boratée, puis de l'alcool. En même temps, s'assurer de l'hémostase.

4° Prendre avec des précelles flambées une minuscule boulette de coton stérile et projeter sur elle le liquide de l'ampoule de sulfamidé, puis la placer sur la plaie pulpaire.

5° Remplir soigneusement la cavité avec une pâte à l'oxyde de zinc-eugénol, à prise hydraulique.

S'assurer de l'étanchéité parfaite du ciment provisoire en le lissant à la spatulette, tout en prévenant le malade qu'il devra au moment même supporter une légère sensibilité.

Le pansement ne devrait pas rester en place beaucoup plus d'une semaine, l'idéal me paraissant varier suivant les concentrations employées entre trois et huit jours.

Et il ajoute que l'on peut avoir recours à un sulfamidé pulvérisé qu'adopte le chirurgien une fois son opération terminée, et ceci dans le cas d'un patient qui est obligé de s'absenter. "Cette intéressante variante consiste à poudrer la plaie pulpaire au Septoplix et à y passer aussitôt un vernis collodion à l'éther." La cavité est alors remplie d'un ciment oxyde de zinc eugénol auquel l'on mélange une quantité de Septoplix en poudre au moins égale à celle de l'oxyde de zinc.

Les sulfamidés que recommande le Docteur Macler sont ceux qui ont un pH neutre afin de se rapprocher le plus possible du pH pulpaire, Et les voici: Soluseptazine - Solufontamide - Exosulphonyl - ce dernier ayant l'inconvénient d'être trop adhérent. Et il termine en faisant rapport de ses observations:

Pour 46 cas de fermeture par première intention, par poudrage préalable à l'Exoseptoplix; un échec.

Vitalité parfaite sous 45 coiffages.

Pour 35 cas de fermeture par deuxième intention: 3 échecs.

14 dents en traitement dont certaines

en obturation néodontinaire très avancée.

Parmi ces cas, des pulpites franches ont été jugulées et les signes cliniques post-opératoires sont favorables.

Parmi les échecs, l'un d'eux a entraîné la pulpectomie, un autre est dû à la négligence du malade qui, calmé, a négligé son rendez-vous, ce qui s'est traduit également par une pulpectomie.

Le troisième, qui m'a suffisamment intéressé, sera indiqué dans les observations qui suivent:

Voici quelques cas sur une douzaine résumant l'obturation (de la brèche pulpaire) par deuxième intention, rapportés par le Docteur Macler:

1° Mme M . . . 35 ans — G7, carie triturante avec petite perforation pulpaire sans symptôme. Le 1er avril 1947, pansement avec coton Soluseptazine, sous ciment provisoire, fait d'une pâte oxyde de zinc-eugénol à prise rapide. Le 9 avril 1947, la perforation est obturée par de la néodontine blanchâtre. Dent vivante, réactions normales. Obturation avec un fond de cavité oxyde de zinc-aristol-1162F, poudre eugénol et Amalgame (dent normale le 12 juin 1947).

3° M. T . . . 32 ans — G7, carie mésio-triturante, corne pulpaire très sensible. Pansement Solufontamide, le 1er mai 1947. Obturation néodontinaire le 13 mai 1947. Pansement renouvelé pour favoriser l'épaississement de la néodontine. Vitalité normale le 22 mai 1947. Oxyde de zinc-eugénol et Amalgame.

5° Mme H . . . 30 ans — G5, carie distotriturante, pulpalgie franche, pulpe à nu sur 3mm en longueur. Premier pansement Septoplix en solution le 24 mai 1947. Brèche obturée parfaitement le 20 juin 1947. Une zone haute de dentine infiltrée apparemment recalcifiée. Vitalité normale. Mise en observation sous ciment oxyde de zinc-eugénol. Le 24 octobre 1947 résultat excellent.

7° M. W . . . 28 ans — G7, carie vestibulo-triturante, pulpite très aigue, large corne pulpaire. Le 22 juillet

1947, pansement Soluseptazine: pulpite atténuée, mais encore violente pendant deux heures, puis calme. Le 23, renouvellement du pansement, ensuite tous les deux jours. Vitalité maintenue en dépit d'une certaine sensibilité au chaud et au froid. Le 6 août 1947, grand progrès, mais la perforation qui demeure non obturée prend un aspect membraneux. Coiffage provisoire 1162F plus collodion et pâte oxyde de zinc. Ouverture le 15 octobre 1947. Obturation néo-dentinaire de la brèche et vitalité absolument normale. Fond de pâte oxyde de zinc-citronellol et mise en observation sous eugénate.

- 120 M. P. . . 30 ans — G6, carie mésio-triturante, pulpite, dent très infiltrée. Deux cornes pulpaires exposées. Une couronne est prévue obligatoirement, en égard au délabrement dentinaire. Pansement Soluseptazine: calme, puis dix jours après, pulpite violente. J'essaie de persévérer en laissant se produire d'abord le flux hémorragique et en asptisant la plaie. Pansement Soluseptazine. Mais trois jours après, la mortification pulpaire se signale avec odeur légèrement caractéristique. Pulpectomie, méchage et obturation quatre jours plus tard, le 31 juillet 1947. Suites normales." "

Et enfin j'en arrive à la dernière citation de l'auteur de cette intéressante communication:

"Comment expliquer l'action des pansements avec les sulfamidés liquides:

"— Est-ce par un effet anesthésique dû à une compression?

"— Est-ce par action sur le trophisme nerveux?

"— Est-ce l'action bactériostatique des sulfamidés dans tout le milieu pulpaire, et peut-être le péri-apex, et la reprise de l'état de défense?

"Je serais très embarrassé pour répondre à cette question.

"Voilà pour les sulfamidés.

Je vous l'ai dit en abordant mon sujet: je n'ai jamais eu l'intention de vous définir une méthode de traitement, mais seulement de vous exposer des possibilités nouvelles et de vous apporter à l'appui des faits probants et concluants.

Je vous engage à tenter vous-mêmes l'expérience.

Ayons l'espoir de voir enfin naître la thérapeutique idéale qui permettra de sauver plus fréquemment encore la pulpe de nos dents.

Je forme le voeu que plusieurs canadiens essaient ce nouveau genre de traitement conservateur de la pulpe, qui me semble être très prometteur, à condition que l'on suive rigoureusement les indications recommandées plus haut. Il faut posséder le souci des détails, si l'on veut vraiment atteindre le but désiré, qui est la régénération des tissus dentinaires autour et au-dessus de la pulpe exposée.

Je suggère à ceux qui sont prêts à essayer ce traitement, d'entreprendre des cas de pulpe légèrement exposée d'abord, et des cas plus avancés par la suite, après avoir acquis une certaine assurance et habileté, se servant de l'anesthésie locale pour faciliter l'ablation de la carie et aussi les approches de la pulpe. Il peut vous arriver de rencontrer dès vos premiers essais, des cas rebelles. Ne perdez pas confiance pour si peu. Renseignez-vous par une radiographie, sur la condition des tissus péri-apicaux. Vous en trouverez la cause. S'il y a infection, inutile de persister; il faut avoir recours à la pulpectomie partielle ou totale, suivant le cas. Persistez en ce traitement conservateur de la pulpe, car les possibilités sont encourageantes. Je reviendrai plus tard vous faire part d'observations personnelles sur plusieurs cas entrepris depuis quelques mois. De ce nombre, quelques-uns sont terminés avec succès et attendent que le facteur Temps ait confirmé avec certitude la vitalité évidente de la pulpe, une fois la régénération dentinaire terminée.

3221 De Sérigny
Côte des Neiges, Montréal, P. Qué.



PAGES EDITORIALES

COMITE DE REDACTION

PAUL GEOFFRION, B.A., D.D.S., A.I.D.O., F.I.C.D., L.C.D. ARMAND FORTIER, D.D.S., L.C.D.

Rédacteur:

GERARD DE MONTIGNY, B.A., D.D.S., M.Sc.D., L.C.D.

397 est Boul. S.-Joseph, Montréal

Soins dentaires dans les hôpitaux

A la dernière réunion du Bureau des Gouverneurs de l'A.D.C., à Murray Bay, en juin, le Comité des Services Dentaires Hospitaliers a soumis des recommandations de principes clairs et élaborés sur la question des soins dentaires donnés aux malades dans les hôpitaux par des dentistes. Le Comité a édifié des bases générales, qui devraient être suivies dans tous les hôpitaux canadiens et qui établissent la politique de l'Association dans ce domaine.

Ce rapport devrait se trouver dans les mains de tous les dentistes, qui font du service hospitalier, pour leur éducation personnelle et pour l'amélioration de leur département.

Comme corollaire à ce problème, se greffe la situation difficile, qui résulte parfois de l'admission de patients dans un hôpital pour des traitements dentaires. Dans certaines régions rurales, il a une tendance à pratiquer les extractions multiples dans l'hôpital local. Habituellement, le dentiste fait hospitaliser son patient et demande une consultation médicale, si ces extractions doivent se faire sous anesthésie générale. Souvent le dentiste n'est pas membre du personnel de l'hôpital. Des anesthésies locales et générales sont souvent données, sans que le patient ait subi d'examen préopératoire. Quelle serait la responsabilité de l'hôpital dans un cas de mort subite? On a aussi posé cette question au sujet d'un médecin de campagne, qui pratique des extractions, à l'hôpital, avec l'aide d'un autre médecin-anesthésiste, lui non plus membre du personnel? Les hôpitaux ont des règlements—ou devraient en avoir—qui exigent que tout nouveau patient, et surtout celui qui doit subir une anesthésie générale, ait un examen médical. Dans le cas de patients dentaires, cette procédure demanderait l'intervention

d'un médecin. Quand il s'agit d'anesthésie locale, cet examen supplémentaire, qui augmenterait les honoraires payés par le patient, devient moins nécessaire; toutefois, ce manquement à la règle générale signifie une admission en dehors du contrôle du personnel médical et expose l'hôpital à des ennuis, dans un cas d'accident. D'un autre côté, l'hôpital local a le devoir moral envers la population d'une région de faciliter tout genre de traitement et d'aider la profession dentaire—profession-soeur de la médecine—à accomplir sa besogne dans les meilleures conditions possibles.

Et ces extractions chirurgicales et élaborées sont des traitements qu'il vaut mieux donner, en toute sécurité, dans un hôpital.

Un autre aspect du problème comporte l'admission des malades dentaires. Ces entrées devraient-elles être contrôlées par un dentiste, membre du personnel de l'hôpital, ou tous les dentistes d'une localité auraient-ils le privilège de suivre leurs patients à l'hôpital, à titre de courtoisie professionnelle?

Cette question pourrait être tranchée par le bureau de direction de chaque hôpital, où des occasions semblables se présentent. Il nous semble qu'il serait raisonnable de laisser à tout dentiste licencié d'une région la faculté d'hospitaliser ses patients et de les suivre. Cependant, s'il s'agit d'anesthésie générale, il serait convenu qu'un médecin serait demandé pour procéder à un examen du malade et lui donner l'anesthésie générale, à moins qu'un autre dentiste soit qualifié pour ce genre de travail.

Dans le cas de patients d'assistance publique, un médecin du personnel serait en charge des cas. Dans les hôpitaux, qui ont un service dentaire organisé, le dentiste en charge de ce service devrait être considéré comme un membre reconnu du personnel actif—un spécialiste dans le domaine de la dentisterie.

Les admissions et les opérations de toute nature, faites par des praticiens, qui ne sont pas membres à aucun titre du personnel d'un hôpital, soient-ils médecins ou dentistes, ne devraient pas être permises, parce que non contrôlées et sujettes à un fléchissement dans la qualité du travail.

Telle est la politique de l'Association sur cette question.

GERARD DE MONTIGNY.

Prévoyance des épouses des dentistes

Comme d'habitude, à l'occasion des élections provinciales tenues en juillet dernier, des sommes d'argent ont changé de mains à la suite de paris faits sur les résultats. Une des meilleures histoires racontées sur ces paris regarde un dentiste du comté de Beauce, qui avait parié une petite fortune (\$8,000.00) sur les chances des libéraux. Le soir, au dépouillement du scrutin, le pauvre confrère disait à qui voulait l'entendre qu'il était ruiné! Ses amis lui disaient qu'il était fort d'avoir risqué une somme semblable. Sa femme, toutefois, ne cessait de lui répéter qu'il ne perdait rien. Chaque fois que son mari gageait mille dollars pour les candidats de M. Godbout, elle, avec de l'argent, qu'elle empruntait de ses parents, misait autant sur les chances des candidats de l'Union Nationale!!

Méthode simple de fouler un amalgame de bonne qualité*

Note de la rédaction: Nous tenons de notre distingué confrère, Charles Th. Bonsack, rédacteur français de la REVUE MENSUELLE SUISSE D'ODONTOLOGIE, une série intéressante d'articles courts sur des sujets pratiques, qu'il veut bien dédier à ses confrères canadiens-français, pour qui il éprouve une grande sympathie. Nous publierons ces communiqués, quand l'occasion nous sera propice.

Voici comment nous procédons pour l'amalgame riche en argent, c'est-à-dire 65% d'Ag et au-dessus:

Nous faisons un mélange un peu moins riche en Hg que les prescriptions des fabricants, nous inspirant du fait qu'un examen de vieilles obturations par un des métallographes du Bureau of Standards des U.S.A. donnait une proportion de 5,7 à 5,8 parties de Hg opposées aux 5 parties d'autres métaux (proportions des fabricants: 6 à 7 parties de Hg). Le malaxage se fait pendant 60 à 75 secondes. Il est suivi d'un court pétrissage dans la main. La masse ainsi préparée est divisée en plusieurs portions selon l'importance de l'obturation, puis on en prend la première dont on exprime l'excès de Hg et on l'insère, particule après particule, dans la cavité en garnissant tout d'abord les points de rétention et le bord marginal. Dans le foulage d'un amalgame il faut se rappeler la phrase du Prof. Métral: "Un amalgame ne va que là où on le met et il faut l'insérer particule par particule comme dans les aurifications à l'or mou." Par un mouvement de va et vient on peut déjà exprimer un certain excès de Hg avec le fouloir, puis on continue le foulage jusqu'au 1/3 de l'obturation. Arrivé à ce stade, on condense la masse avec un brunissoir lisse (Glattfinierer) du plus grand numéro possible par rapport à la cavité, monté sur le tour électrique. On élimine ainsi un magma très riche en Hg et l'on peut ensuite poursuivre l'opération en alternant le foulage et l'expression à la machine du Hg superflu. *Pour obtenir un point de contact parfait, il ne faut jamais fouler dans la direction du centre de la dent, mais toujours contre la matrice et cela avec force.* Chaque portion d'amalgame qu'on avait laissée en réserve doit être débarrassée

d'un excès de Hg aussi grand que possible par une pression énergique pour être prête au foulage. On remplit la cavité avec un excès de matière pour pouvoir brunir encore plus énergiquement et plus longtemps à la machine sans découvrir les bords. Cette méthode permet l'obtention d'une dureté *immédiatement* si grande qu'une sonde n'y laisse qu'une très faible empreinte.

On procède ensuite au sculptage provisoire de l'obturation, *puis on enlève immédiatement la matrice.* Pour éliminer tout risque d'endommagement de l'obturation lors de l'enlèvement de la matrice, il faut

- 1° avoir une obturation condensée à la machine d'après la méthode ci-dessus;
- 2° enlever l'excès d'obturation qui remonte contre la matrice et arrondir l'amalgame environ 1 mm au-dessous du niveau triturant à l'aide d'une sonde, car c'est là une des principales causes d'échec;
- 3° ouvrir les bras de la matrice au maximum *en les rabattant* contre la dent voisine;
- 4° exercer un *léger* mouvement de balancement qui délogera peu à peu la matrice et, avec un doigté moyen, on l'enlèvera sans aucun dommage.

Cet enlèvement immédiat de la matrice permettra d'éliminer facilement les excès toujours possibles et de vérifier l'occlusion, car la masse est encore aisément "travaillable."

L'obturation ainsi obtenue aura une dureté remarquable, une teneur minimale en Hg et un fini qui rendent superflues toutes autres manipulations, car on cumule le foulage et le brunissage et le dernier passage au brunissoir lisse ne dure pas plus d'une à deux minutes.

Le polissage final se fait avec une grande facilité lors d'une prochaine

* Tirage à part de la "Revue mensuelle suisse d'Odontologie". Tome 56, 1946, No 6.

séance sur une masse aussi bien condensée. Nous le pratiquons en nivelant les bords avec une grande fraise ronde *usée*. Cela égalise les bords de l'obturation sans endommager ceux de la cavité; nous passons ensuite sur l'obturation un disque en caoutchouc abrasif *Burlew*, puis une brosette en coupe garnie de pâte à polir *Wild* ou autre et nous finissons en passant encore une brosette en roue à *sec* dans tous les sens sur l'obturation. Nous aurons ainsi un poli magnifique digne d'une condensation bien poussée. Le polissage au disque de papier de grains différents est archaïque et dangereux pour l'intégrité de la forme de l'obturation et encore plus pour les bords de la dent. Le

passage des bords à la meulette est également dangereux. Quand au polissage final à la pierre ponce et au Blanc de Troie, pourquoi y persister quand nous avons des pâtes spéciales, peu coûteuses, qui rendent des services supérieurs? Il en est de même pour la dégrossissage et le polissage de travaux, en or au laboratoire. C'est une "économie de bouts de chandelles" de rester aux deux produits cités ci-dessus, car on a des agents de dégrossissage et de polissage en pain et de différents grains d'une efficacité infiniment supérieure. Ils raccourcissent cette phase du travail de la moitié du temps qu'on mettait avec la pierre ponce.

—Bonsack.

Journées Dentaires de Paris

Nous avons l'honneur de rappeler à nos confrères que les

XXIIes JOURNEES DENTAIRES DE PARIS

auront lieu du:

24 au 28 NOVEMBRE 1948

dans les locaux de l'Ecole Odontotechnique de Paris, 5, rue Garancière, PARIS (6e), sous la Présidence d'Honneur de:

M. le Professeur Pasteur VALLERY-RADOT

Membre de l'Académie Française

Membre de l'Académie de Médecine

Le Comité des JOURNEES DENTAIRES DE PARIS inaugure pour cette année une nouvelle formule susceptible d'intéresser nos confrères. Ce sont: les questions et les réponses.

Dans chaque spécialité:

- Chirurgie maxillo-faciale
- Dentisterie opératoire
- Dentisterie infantile
- Hygiène bucco-dentaire
- Orthopédie dento-faciale
- Pathologie buccale
- Pathologie péri-buccale
- Pathologie dentaire
- Prothèse complète
- Prothèse partielle, fixe et amovible
- Prothèse maxillo-faciale.

Le Comité serait heureux de recevoir une dizaine de questions posées par les confrères, questions qu'il soumettrait aux praticiens les plus autorisés de chacune de ces spécialités, en leur demandant de bien vouloir y répondre.

Le Comité prie les confrères que cette idée pourrait intéresser de bien vouloir adresser au Secrétaire Général, Robert DUPONT, 29, Bld. Malesherbes, PARIS (8e) la liste des questions qu'ils désireraient voir traiter dans chaque spécialité.

Pour les communications s'adresser également au Secrétaire Général.



Photo copyright Clifford R. Kopas.

Tetachuck Lake, Tweedsmuir Park, B.C.

In heart of B.C. wilderness, three hundred miles
north of Vancouver.

Every man, and especially every professional man, can make a contribution to his country's greatness by standing for the highest things. Cultivate a richer intellectual life; cultivate the neglected art of thinking; cultivate faithfulness to the moral elements of every situation; above all, cultivate the religious sense. No state can long endure unless it has spiritual ideals, spiritual guidance and spiritual control. God has given us on this continent a marvelous heritage; may He also give us the will, the wisdom and the power to adorn it!—Rev. Dr. H. J. Cody, in *Jour. Am. College of D.*

.....



W. M. BLAIR, D.D.S., Regina, Saskatchewan.

Governor for Saskatchewan of the Canadian Dental Association.
Graduate of McGill University in 1925.

Attached to 1st Canadian Division, Ammunition Columns
in the First War.

President of the Saskatchewan College of Dental Surgeons.
Past President of Regina Dental Society.

Chairman, Board of Stewards, Lakeview United Church.
Member of Rotary Club.

Member of Wascana Lodge, A.F. & A. M.
Director of Wascana Winter Club.

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THE ODONTOMES

by GEORGE A. MORGAN, D.D.S., Toronto, Ontario

THE dental follicle found around all unerupted teeth contains many epithelial cell rests of the embryonic type. These cells are called cells of Malisa and are capable of forming supernumerary teeth, homogeneous masses of tooth structure or various types of dental cysts.

When the cells of Malisa form a single tooth, it is called a denticle or a supernumerary tooth. When groups of supernumerary teeth are formed, they are called compound, composite odontomes. When the cells of Malisa

form homogeneous masses of tooth structure, they are called complex, compound, composite odontomes.

Compound, composite odontomes almost always occur in the cuspid regions. They are seen in the roentgenograms as a bundle of malformed, diminutive teeth, generally held together by a mass of soft tissues. They are often responsible for the non-eruption of the central, lateral, cuspid or bicuspid teeth. Early recognition and the removal of the odontomes will allow the normal eruption of these afore-



FIG. 1

Compound, composite, odontomes. Impacted teeth in a grape-like cluster.



FIG. 2

Compound, composite, odontome. Impacted teeth in a ball causing the further impaction of a permanent maxillary bicuspid.



FIG. 3

Compound, composite, odontome. Impacted teeth causing the further impaction of a permanent mandibular bicuspid.

mentioned teeth. A small percentage of odontomes which are allowed to remain are responsible for the formation of dentigerous cysts, whereas some others become infected.

Complex, compound, composite odont-



FIG. 4

Complex, compound, composite odontome. Homogeneous mass of tooth structure. Mandibular third molar region.

tomes occur most commonly in the posterior regions and are seen in a conglomeration of tooth structure, which may or may not include fully developed teeth. They are invariably larger than compound, composite odontomes for they manifest a tendency to continued growth. They may become infected or reach sufficient size to produce pathologic fracture.

Compound, composite odontomes seem to be formed between the de-



FIG. 5

Complex, compound, composite odontome. Homogeneous mass of tooth structure, in the mandibular third molar region and the angle of the ramus.



FIG. 6

Complex, compound, composite odontome. Homogeneous mass of tooth structure filling the entire ramus of the mandible.



FIG. 7

Photograph of portion of structure removed from Fig. 6.

ciduous and permanent dentitions. The complex, compound, composite odontomes seem to form along with the

third molar dentition. Sex does not seem to be a factor.

419 Medical Arts Building.

All instruction should recognize the now indisputable and challenging fact that the content and procedures of dental education should presuppose that adequate dental service must serve biologic ends. It is therefore essential that students acquire understanding and appreciation of oral and systemic relations in both health and disease; of the biologic significance of restorative and replacement procedures; and of the interdependence of the dentist and the physician in meeting health needs. This conception does not minimize the importance of the technical phase of dentistry, but it does recognize oral diseases and disorders as major health problems and makes imperative the thorough training of the student in biologic fields.

The need for thorough research into the causes of oral disease and into the problem of the promotion of oral health is universal and compelling. Therefore every dental school, whatever its stated objectives, should be animated by the spirit of inquiry. The mere prosecution of routine class and laboratory assignments is purposeless without genuine scientific approach; no dental school fulfils its mission unless its graduates go out into dental practice inspired and prepared to explore the unknown fields that beckon them in their chosen profession.—Council on Dental Education of A.D.A.

Commenting recently on the tendency of many persons in government to favour compulsory health programs, Governor Dewey is reported as saying, "I am profoundly convinced, after 18 years in government, that government can never do any job as well as private enterprise. The job of running voluntary hospitals can best be done by free individuals and not by those under the constriction of the business of running a government." Touching on the long hours and sometimes inadequate fees many physicians endure Governor Dewey noted that it was hardly fair for politicians to try to "Socialize them and bring them down to a level of servility."

CURETTE OR RESECT?

by H. H. PEARSON D.D.S., Montreal, Canada.

AMPUTATION, Apicoectomy, Resection, and Periapical Curettage are surgical procedures used over a period of many years to eliminate necrotic conditions at the apices of pulp involved teeth. Basically these operations are all alike with the one exception, that is, the amount of root end that is removed. There is no doubt that the use of each of these techniques has produced satisfactory results for the operator who was able to recognize a good prognosis from the symptomatic and aetiological factors present in each case.

The questions that arise to help one decide which procedure to follow, are many. One must consider not only the amount of investing tissue that will remain to support the tooth and the amount of root left to be covered with new osseous tissue, but the accessibility of the diseased periapical area, before choosing which technique to follow. It is the contention of the writer that the forementioned techniques are each good in the particular case where indicated but no one of them should be accepted as a standard superior to the others for all types of cases.

This should be the modern concept of all dento-surgical procedures. A desire to utilize the best of the past alongside of the ultra modern techniques of today should not be discouraged. Theodor Blum¹ performed hundreds of apical amputations, later called apicoectomies with considerable success. This technique was changed to one called resection by some who maintained that too great a loss of root length was not necessary and could be avoided^{2,3,4,5}. Thousands of teeth have been treated successfully by this modified surgical technique. Garvin reported on "Root Tip Amputation" by Hartzell in 1911, by Ottesen in 1915,

and on his own technique in 1916 when he used silver amalgam both to seal the canal and to avoid exposing large areas of devitalized dentine after resection⁹.

The technique which is now making the "Headlines" in dental journals and textbooks is called, "Periapical Curettage". In this technique no part of the root is cut away, but the denuded cementum is curetted. Grossman⁶ reports that S. M. Weaver advocated and practised periapical curettage without resection for about forty years. Barron, Crook, and Gottlieb⁷ report excellent results from periapical curettage of roots filled with cement and dentine powder, and the exposed denuded apex is curetted in an attempt to remove all septic material adhering to the cementum. The reason for reintroducing this most conservative of surgical procedures is two-fold, firstly, to avoid dimensional loss of the root and secondly, to retain a complete covering of cementum over the dentine.

The theory is that the periodontium will grow back onto the cementum but not onto exposed dentine⁷, and that a new cementum will not grow back onto the excised dentine. Coolidge⁴, however, shows by means of very fine illustrations how this repair process does really take place. However, W. Clyde Davis maintains that this new tissue is not cementum but a form of connective scar tissue that becomes calcified and covers the new surface of dentine. He concludes that this is not a normal restoration of the missing tissue, therefore, "I have ceased to do the operations of apicoectomy but curette instead"⁸. To repeat, one school maintains that a new cementum and a periodontal membrane re-establish themselves on the exposed dentine of the excised root and the other school maintains that this does not happen

but admits that new connective tissue cells do deposit themselves over the exposed dentine and become a specialized form of scar tissue that later is calcified. It is maintained that this later procedure should be avoided.

How can one be sure that the eroding effect of the septic fluids does not lead through the cementum into the dentine of the denuded root end? If such is the case, then the dentinal tubuli must contain micro-organisms, and no amount of curettage of the cementum will sterilize the dentine in this area.

What about the lateral canals that are so often present near the apex? No amount of curettage of the cementum can sterilize the contents of these unfilled canals. Clyde Davis⁸ and B. Gottlieb⁷ maintain that the new tissue which redeposits itself over the exposed dentine is not normal cementum and periodontium, but a calcified connective scar tissue. This argument should not deter us from continuing to perform resection operations. Scar tissue is accepted as a good and satisfactory repair material. Our aim is to save as much of the root as possible, it is true, but not at the risk of leaving a septic apex to prevent the tooth from resuming its normal function and be tolerated by the tissues. The repair material may be called anything, even the common term, "scar tissue", but a technique proven successful over a period of many years should not be condemned because the tissue is not a true reproduction of the original.

Other organs of the body that experience surgical interference do return to normal function as a result of the repair mechanism of the involved tissue. This is a different type of tissue to that which may be seen repairing of the ravages of pathological lesions. It is a tissue that has been planned, directed, and stimulated in so far as it is possible to motivate the behaviour of living cells.

I. Indications for Amputation or Apicoectomy:—

- (a) Where a cyst is present and

good access is required to facilitate the removal of the entire sac.

- (b) Granuloma, to facilitate curetting all necrotized tissue palatally to the root apex.
- (c) Where the root surface presents facets and pits resulting from the dissolving action of the septic fluids present.

II. Indications for Resection techniques:—

- (a) To eliminate that portion of the apex that may contain lateral canals.
- (b) To remove a curved apex that could not be reached by the direct technique for debris-removal, sterilizing, and filling.
- (c) To sterilize and fill the apex by the reverse technique.

III. Indications for periapical curettage:—

- (a) To remove a diffused periapical abscess.
- (b) Excess root canal filling and sealer.

CONCLUSIONS

A good rule to follow is to use that technique which will result in the conservation of the greatest amount of healthy tissue by the complete elimination of the diseased tissue and by the incisions designed to encourage the speediest recovery.

BIBLIOGRAPHY

1. Grossman, Louis I.—Textbook on "Root Canal Therapy", 2nd. edition Lea & Febiger. Pages 26 & 312.
2. Somers, Ralph F.—"Root Resection", Canadian Oral Health, September 1946, Page 653.
3. Gottlieb, B., Barron, S. L., Crook, J. H.,—"Conservative Treatment of Exposed and Necrotic Pulp", Texas Dental Journal Volume 64, January 1946.
4. Coolidge, Edgar D. Textbook "Clinical Pathology and Treatment of Dental Pulp" Pages 167-168.
5. Davis, W. Clyde—Textbook on "Operative Dentistry", 5th edition 1945 p. 402, C. V. Mosley Co.
6. Grossman, Louis I.—Textbook on "Root Canal Therapy" 2nd edition p. 324.
7. Barron, Crook, Gottlieb — "Periapical Curettage or Apicoectomy", Texas Dental Journal, February 1947.
8. Davis, W. Clyde, Personal Communication, April 30, 1948.
9. Garvin, M. H.—"Root Resection", Journal of Canadian Dental Association. March 1942, p. 126.

500 New Birks Building.

Histological Study of Healing Following Detachment of Tissue as is Commonly Carried Out in the Vertical Incision for the Surgical Removal of Teeth*

by SAMUEL M. BORDEN, D.D.S. M.S.D., Winnipeg, Manitoba

A GREAT DEAL has been written about the reattachment of the connective tissue fibres of the periodontal membrane to the tooth cementum, following conservative periodontal pocket therapy. Very little literature is available, however, directly pertinent to the possibility of a connective tissue reattachment following detachment of the gingivae, as the result of a carefully reflected surgical flap.

Accordingly the study was undertaken of determining in humans and dogs by means of histological specimens, whether or not a true connective tissue reattachment occurred throughout the entire length of a carefully planned and executed detachment.

The study is of inestimable importance to the oral surgeon, for if a true connective tissue reattachment does not take place following the surgical detachment of tissues, teeth are constantly being predisposed to periodontal involvement whenever they are included in a gingivally reflected flap. In this event it might be advisable to develop a technique whereby surgical flaps could be reflected, without involving the gingival crests of adjacent teeth.

After an extensive survey of all the available literature, the author has been able to find only two articles pertaining to the histological study of reattachment following surgical detachment in humans.

Workman¹, experimenting at Northwestern University Dental School, upon removing and studying block sections of tissue which were allowed to heal for a period of four weeks follow-

ing detachment, concluded that histologically the relationship between the periodontal membrane fibres and the tooth cementum, remained unchanged.

Beube², working on both humans and dogs, retracted the mucosa overlying the normal supporting structures of canine teeth, mechanically removed the buccal plate of bone including the periodontal membrane, cementum and part of the dentine.

It was evident from this study that the supporting structures of teeth, both animal and human, are repaired after mechanical removal and that biologic reattachment takes place.

At present there is a good deal of controversy among oral surgeons as to the manner in which mucoperiosteal flaps should be reflected.

Dingman³ believes that it is perfectly permissible to detach the gingival tissues from around the necks of teeth not to be extracted for, "If carefully replaced the tissues reattach and it is impossible to tell clinically in a week or ten days that the gingival attachments have been disturbed".

Mallett⁴, however, prefers not to involve the gingival crests of adjacent teeth because of the resultant recession with consequent erosion of these teeth at the gingival margin.

All the material for this study was obtained from clinic patients from the Oral Surgery Department of Northwestern University Dental School.

Only patients with approximately normal periodontal membrane attachments were utilized in this study. This necessitated the use of fairly young individuals who presented themselves

*Abstract of Thesis submitted in partial fulfillment of the requirements of Northwestern University for the degree of Master of Science in Dentistry.

to the surgery clinic requiring full mouth extractions as the result of dental caries.

At the first appointment, following mandibular block anaesthesia a horizontal groove was cut on the labial surface of the lower left second bicuspid, at the level of the gingival crest. By means of a Williams periodontal probe a measurement was taken from the groove to the base of the gingival crevice.

A vertical incision was then made slightly distal to the lower left cuspid and a surgical flap reflected from the cuspid to the lower left third molar, special care being taken to detach the gingivae well back from around the bicuspid. The three molars present were then extracted, the tissue around the bicuspid carefully replaced and sutured into position.

At the next appointment the molars and bicuspid of the lower right side were extracted. In so doing the second bicuspid was removed in a block section along with the surrounding gingivae, alveolar process and periodontal membrane. The lower right second bicuspid is here used as a control to study the normal, undisturbed relation of the tooth to its surrounding periodontium.

Three weeks after the tissue reflection on the lower left side, the lower left first bicuspid was extracted and a block section of the second bicuspid with its surrounding hard and soft tissue removed. Since the gingival tissues were previously detached from around the second bicuspid, it is the tooth used, to study the extent of reattachment.

The block section was removed using a modification of the technique outlined by Zemsky³. A semi-circular incision starting at the mesio-buccal corner of the second bicuspid, cutting horizontally across the root of this tooth and ending at its disto-buccal aspect was made, with the convexity toward the apex.

The area of tissue outside the line

of incision was then reflected, exposing the buccal alveolar bone and leaving isolated a portion of the gingivae attached around the second bicuspid.

The block of tissue to be removed was then outlined using a number 701 fissure bur in a straight handpiece. Care was taken to penetrate completely through the buccal alveolar process and partially into the root, to ensure the complete loosening of the section before the attempted removal. When this was wholly freed a lower bicuspid forceps was carefully applied to the tooth, which was then removed along with the attached tissues. Extreme care was essential in the extraction so that the attached tissues would remain undisturbed for accurate histological examination.

The identical procedure was followed on a second human case except that the experimental tooth used was the upper right second bicuspid and the period of healing following detachment was only two weeks.

Two dogs were also utilized in the experiment, block sections being removed after healing periods of one and three weeks. A cross-sectional study was also undertaken of a vertical incision, following a three-week healing period in the dog.

Following the two- and three-week healing periods in the human, measurements were taken from the base of the gingival crevice to the fixed point previously marked on the experimental tooth. In both instances the distance to the fixed point was found to be exactly the same following the healing as prior to the surgical detachment. It was noticed, however, that a marked recession of the gingivae had occurred in both cases.

The dog specimen seen in *Figure 1* was obtained sufficiently early so as to enable a study of the repair process taking place one week after surgical detachment. The line of granulation tissue which can be seen extending from below the cemento-enamel junction to the outer surface of the alveolar

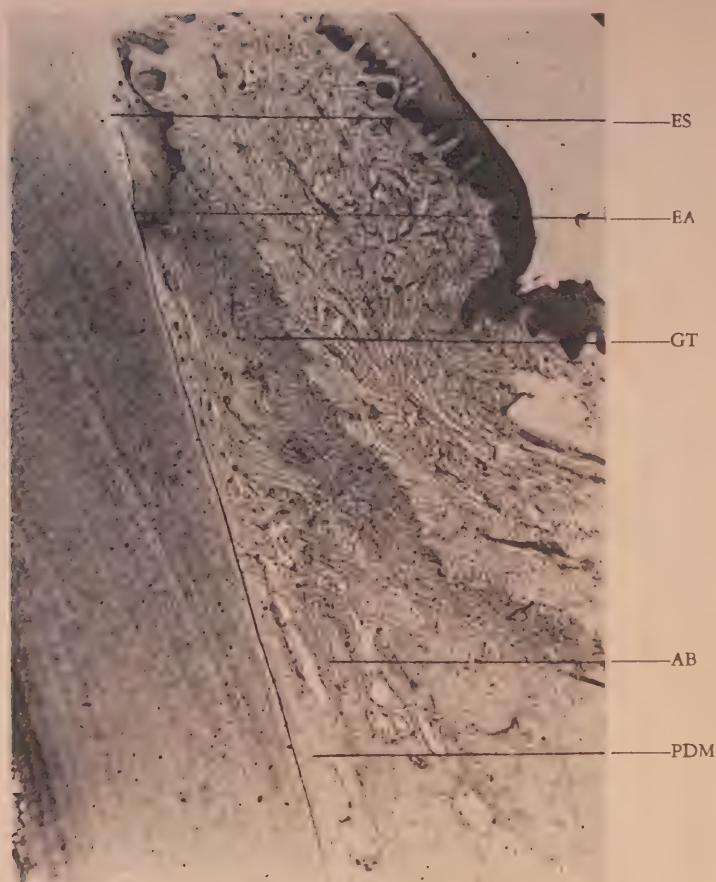


FIGURE 1

Labio-lingual Section of One-Week Healing in the Dog. Low Power, Hematoxylin and Eosin Stain.

ES.....	Enamel Space	AB.....	Alveolar Bone
EA.....	Epithelial Attachment	PDM.....	Periodontal Membrane
GT.....	Granulation Tissue		

bone represents the area of healing and is thus indicative of the path along which the tissue was detached.

This is highly informative for it indicates that in the retraction of a mucoperiosteal flap, the alveolar crest fibres, which run from the crest of the alveolar bone to the tooth cementum need not necessarily be disturbed.

The area of complete periodontal membrane detachment in this specimen involved only the free gingival fibres and extended for a short distance along the cementum just below the cemento-enamel junction.

When the flap has been reflected, the alveolar bone and cementum of the tooth can readily be seen with the

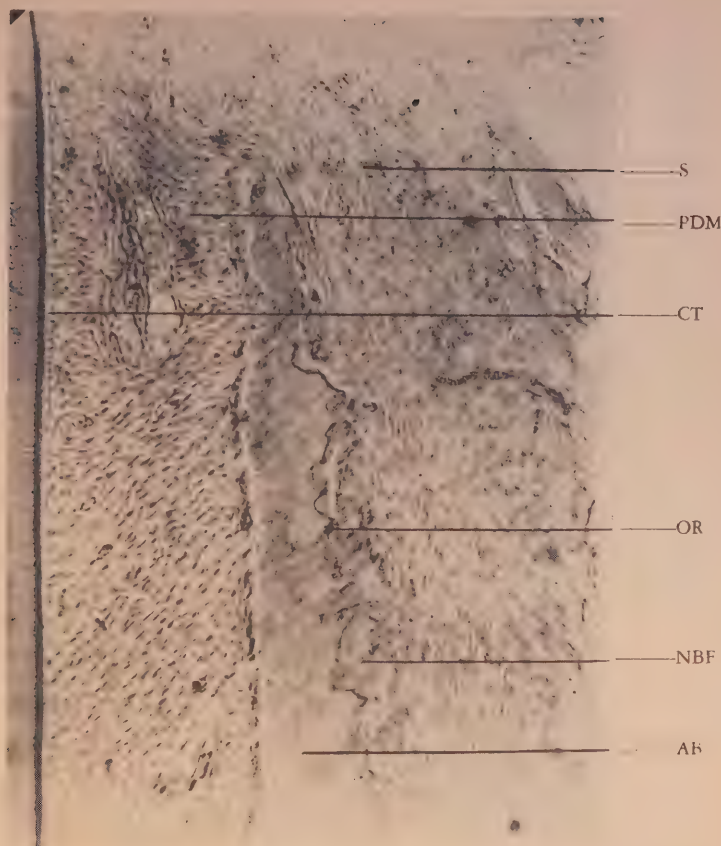


FIGURE 2

Labio-lingual Section of Three-Weeks Healing in the Dog. High Power. H. and E. Stain.

S..... Submucosa
PDM..... Periodontal Membrane
CT..... Cementoid Tissue

OR..... Osteoclastic Resorption
NBF..... New Bone Formation
AB..... Alveolar Bone

naked eye. This would lead one to believe that all the periodontal fibres above the alveolar crest have been detached. Microscopically, however, the periodontal fibres can be perceived remaining attached to the tooth surface.

Thus it can be seen that following a surgical detachment the soft tissues return to normal by virtue of two

separate phenomena. The first is a reattachment of the connective tissue fibres of the periodontal membrane to the tooth cementum. The second is by the formation of granulation tissue along the line of detachment.

Figure 2 was obtained from the three-week dog specimen and shows great osteoclastic activity with a lesser amount of bone formation on the outer

**FIGURE 3**

Cross-section of Three-week Incision Line in the Dog. High Power. H. and E. Stain.

LG.....	Labial Gingival	ES.....	Enamel Space
LI.....	Line of Incision	D.....	Dentine
EA.....	Epithelial Attachment		

surface of the alveolar bone.

Figure 3 is a cross-sectional study of a vertical incision following a three-week healing period. Complete healing can be seen to have taken place, the only evidence remaining as a consequence of the incision being a depression due to fibrous contraction of the wound edges.

From a study of twenty-five muco-

periosteal flaps it has been ascertained, by a series of measurements that a reattachment of the detached soft tissues to the tooth does take place clinically following surgical detachment.

It has however been noticed that the depth of the gingival crevices around teeth involved in flap retraction is decreased, due to recession of the gingival tissues.

It has also been noticed that there is a decided V-shaped loss of tissue at the gingival extremity of the vertical incision, the extent of the deficiency varying inversely with the thickness of the incised tissue, i.e. the thinner the tissue, the more pronounced the recession. From clinical observation the author is convinced that surgical flaps should, whenever possible, be reflected so as not to involve the gingival crests of adjacent teeth.

CONCLUSIONS

Histological examination reveals that following a vertical incision and surgical detachment of a mucoperiosteal flap:

1. The connective tissue fibres of the periodontal membrane will reattach themselves to the tooth cementum.

2. Healing takes place in the periodontal membrane by the formation of granulation tissue with subsequent fibrosis at the site of separation.

3. New cementum, bone and connective tissue fibres are not essential for reattachment.

BIBLIOGRAPHY

1. Workman, C. N., Jr. "Studies in Reattachment of the Gingivae". M.S.D. Thesis, Chicago: Northwestern University Dental School, 1947.
2. Beube, Frank E. "A Study of Reattachment of the Supporting Structures of the Teeth", *Journal of Periodontology*, 18: 55-66 (April), 1947.
3. Dingman, Reed O. and Hayward, J. R. "Oral Surgery in General Practice", *Journal of the American Dental Association*, 35: 607-628 (November 1), 1947.
4. Malett, Stephen P. "Incisions and Flaps", *American Journal of Orthodontia and Oral Surgery*, 27: 502-504 (September), 1941.
5. Zemsky, James L. "Sources of Material for Histological Investigation of Periodontal Conditions", *Dental Cosmos*, 73: 696 (July), 1931.

The key to greatness is the ability to reduce all problems to their simplest fundamentals. This is especially so in the field of medicine, where more misdiagnoses are due to not seeing the wood for the trees, than to lack of knowledge. But medicine goes further than this, for a good doctor must not only be an able diagnostician, but he must be able to handle the case throughout to the satisfaction of both patient and relatives. He must have an understanding of human nature, and an ability to get on with people from all walks of life, for without this ability he can never succeed, however efficient he may be technically.—Guy's Hospital Gazette.

The supposition cannot be dismissed that the alarming increase of degenerative diseases, including psychological and neurological illnesses, may be related, in a manner yet to be defined, to the steady deterioration and wastage of topsoil, the precious sensitive earth cover through which life flows.—Fairfield Osborn.

A STORY WITH TEETH IN IT

A fourth year Victoria student confided the following story about her sixteen-year kid-sister to a Varsity reporter without a conscience.

Breaths of spring brought a youthful swain to the point of asking our friend's sister for a date. Tremulous parents watched the young couple go off for their night's fun, but taking into account that it was the young innocent's first date they decided to wait up or at least stay awake until she had returned to the parental fold.

At a very respectable hour the waiting parents exchanged nods as they heard the front door open and close. Deathly quiet reigned downstairs for several pregnant minutes, then followed the sounds of a rather frantic scuffle and the quiet was broken by plaintive cries for help of the young daughter.

The parents dashed down the stairs to rescue their child only to be greeted by a tragic scene. The young couple were locked in an unbreakable clinch by the braces on their adolescent teeth. A sleepy dentist hurriedly summoned dissolved the dental combine.—From *The Varsity*, March 5, 1948.

ANNOUNCEMENT

Canadian Dental Association

REGULATIONS GOVERNING THE AWARD OF STUDENTSHIPS

1. The Canadian Dental Association through its Research Committee offers "Studentships" to suitable students or graduates who have given distinct evidence of capacity for original research, (or who have won high distinction in scientific study during their University training), and who desire to prepare themselves further for scientific research by continuing their study in the science fundamental to their research fields.

2. They are available on equal terms to men and women, and are awarded to the applicants who are deemed best qualified by the evidence submitted.

3. The age of the applicant and marital status will be important considerations when making an award. Previous training will also be taken into account.

4. Application for a Studentship must be made by the candidate to the Research Committee of the Canadian Dental Association and addressed to this Committee, care of the Secretary, Canadian Dental Association.

5. Application forms are available at the Canadian Dental Association Office on request.

6. An applicant shall submit a transcript of his university record together with a statement from his sponsor who may be the Dean of a Dental School or head of a scientific department within a university, showing that in his estimation, the applicant is worthy of training for scientific dental research.

7. The candidate shall state the institution at which he intends to study and the general line of work to be followed.

8. Applications will be considered at the regular stated meetings of the Research Committee of the Canadian Dental Association in September, January and May.

9. The applicant must state how much financial assistance is required to complete the proposed course of study. Payments will be made on a monthly basis during the period of which a Studentship is held.

10. All apparatus and materials purchased with grants are the property of the Canadian Dental Association, unless otherwise provided for in specific cases.

11. Part-time teaching in a university department or faculty may be considered favorably during the terms of tenure of the Studentship.

12. Interim reports on the student's progress may be requested from the Dean or head of the department in which the student is working. The Canadian Dental Association reserves the right to discontinue the Studentship after reasonable warning is given the student, if progress reports are unsatisfactory. The final report prepared by the student and supported by the Dean or head of the scientific department, indicating in some detail the results accomplished in the study, must be submitted to complete the tenure of the studentship.

Address all communications to:

THE SECRETARY, Canadian Dental Association,

211 Huron St., Toronto, Ont.

The Forum

AUXILIARY PERSONNEL—HOW FAR SHOULD WE GO?

by DR. P. E. BLACKERBY, Dental Consultant for the Kellogg Foundation,
Battle Creek, Michigan

Condensed from New Eng. D. Jour., July, 1948

The American people are counting on the health professions to provide the leadership that will be necessary for the development of a sound national health program. The dental profession is accepting its share of this great responsibility, and we recognize that our problems are exceedingly complex. Dental disease affects almost the entire population and, in contrast to most other diseases, is cumulative rather than self-limiting in its effects. Each and every dental lesion requires eventually the intervention of the dentist and, up to the present time at least, specific preventive measures have been completely lacking. Today, in the face of a stupendous need for curative dental services and with a steadily rising public demand for care, the dental profession finds its personnel resources almost hopelessly inadequate to meet the situation.

Widely circulated statements, to the effect that the number of dentists in this country will have to be doubled, tripled or even quadrupled in order to meet the dental health needs of the population, carry the implication that this is the only way in which the problem can be solved. These statements are based on the assumption that the dental profession now is working at maximum capacity but providing adequate dental care for not more than 25 to 30 percent of the population. It is further assumed that the remaining 70 to 75 percent of the people would avail themselves of dental service if

there were a sufficient number of dentists to provide it. Both of these assumptions are open to serious question.

Dentists can be said to be working at full capacity only when they are engaged fulltime in providing a high quality of service for a maximum number of patients. It has been demonstrated clearly that the use of auxiliary personnel and equipment enables a dentist to serve 25 to 65 percent more patients than can be served by dentists working without such aid. At the present time, it is estimated that not more than 50 percent of the practising dentists in this country are using dental assistants and only about five percent are using dental hygienists. The number who utilize auxiliary equipment, such as a dental chair, is not known but the figure is believed to be comparatively small. Almost all dentists employ the services of dental laboratories, but it is by no means clearly established that the present system of dentist-laboratory cooperation is an efficient method of providing high quality restorative dental services.

Under these circumstances, it seems extremely doubtful that the dental profession is working at its maximum capacity. The wider use of auxiliary dental personnel and equipment, as a means of increasing the efficiency of the existing number of dentists, would seem to be a logical first step in our efforts to extend dental services to meet the increasing demands of the

public. Furthermore, since the extension of dental services can be expected to involve more and more of the lower income groups in the general population, a conservative investment in dental personnel seems warranted if the services are to be kept within the financial reach of the people. It must be remembered also that the demand for dental service is keenly sensitive to economic fluctuations, and a substantial increase in the number of dentists might show disastrous results in times of economic depression—as in the early 1930's.

In the further development of auxiliary dental personnel, the profession has two broad responsibilities—(1) the use of auxiliary personnel, quantitatively and qualitatively, to the maximum extent consistent with efficient dental practice and (2) the guidance and control of auxiliary personnel, through proper training and supervision, to insure protection of the public and maximum usefulness to the dental profession.

The assistant was conceived as a general utility person in the dental office, whereas the hygienist was for a specific function—dental prophylaxis. Only the busiest and most prosperous dentists seem able to afford the services of an auxiliary worker who confines her activities entirely to the prophylaxis.

The tremendous potentialities in the wider and more effective use of the dental assistant and hygienist point to the urgent need for a careful study of these services.

As demands upon the dentist's professional time increase, it is inevitable that he will be forced to delegate more and more responsibility to his auxiliary workers. If this delegation can be accomplished in an orderly and rational manner, and if auxiliary personnel can be adequately trained and properly supervised in the discharge of these added functions, there should be nothing to fear in this evolutionary trend.

The question arises then as to what functions of the dentist can be safely delegated to nonprofessional personnel and how can such workers be trained to perform these functions effectively. The answer can be found only by a systematic and detailed study of dental practice procedures, but it is logical to assume that the simple non-technical functions should receive first consideration. These might include such procedures as the topical application of sodium fluoride, or other preventive agents, the polishing of fillings and the placement of temporary and perhaps even permanent plastic filling materials, after cavity preparation by the dentist—all time-consuming operations which are hardly beyond the intellectual or technical capacity of the dental hygienist, for example.

There seem to be at least two good reasons to support the view that auxiliary personnel should be trained in the dental schools—(1) to utilize existing facilities capable of providing qualified professional supervision and (2) to enable undergraduate dental students to learn how to use auxiliary personnel intelligently.

It is obvious that the undergraduate medical student, or medical intern, would be very seriously handicapped if, during his period of training, he did not have a close working relationship with the various types of auxiliary medical personnel that have become so widely used today as aids to the practice of medicine. There is every reason to believe that the undergraduate dental student would derive similar benefit from an association with and utilization of auxiliary dental personnel, which he will use extensively when he enters private practice.

In summary our objectives regarding auxiliary personnel should be (1) to increase the utilization of auxiliary personnel by the dental profession; (2) gradually to extend the scope of the services of auxiliary workers, to relieve the dentist of routine duties which can be delegated safely and to

increase the dentist's efficiency; (3) to provide professionally supervised training for all types of auxiliary dental personnel, preferably in the dental schools so that undergraduate dental students may have an opportunity to learn how to use them effectively; (4) to provide professional supervision, directly or indirectly, for all types of auxiliary dental personnel, including

the dental technician, to ensure the protection of the public.

In this way, the manpower resources of the dental profession can be utilized with maximum efficiency, with less physical and mental strain upon the individual dentist, and dental health services can be extended to a much larger segment of the total population, perhaps without a substantial increase in the number of dentists.

TREATMENT OF LEUKOPLAKIA

From Jour. of Am. Med. Assoc. per N.Y. Jour. of D.

The treatment of leukoplakia may be divided into preventive measures and those that attempt to cure. The mouth should be kept clean and the teeth put in order. A simple mouth wash such as sodium perborate solution is adequate. Faulty dental positions may cause cheek biting. The dentures should fit well, and some believe that these structures should be removed from the mouth during the period of active treatment, at least when the patient is not eating. The use of tobacco should be prohibited. No temporizing with this interdiction is permitted, and one should inquire into other chewing habits. The patient should avoid alcohol, hot and highly seasoned foods or the placing of anything in the mouth that is irritating.

The habit of scraping the coated tongue or leukoplastic parts with an instrument should be condemned, nor should other meddlesome practices be indulged in. The use of a silver nitrate stick or other caustic is dangerous.

Where local pain occurs and interferes with proper nutrition, this can be alleviated with anaesthesia troches. Syphilis is said to be a frequent basis if not the cause of leukoplakia. Blood serum tests for syphilis are not always positive during its latent and late periods. If treatment for syphilis should be decided on mercury would best not be used. One should be sure that there is no cardiovascular syphilis or some visceral form that would react

violently in a Herxheimer reaction from the energetic use of penicillin or an arsenical. It is good practice to give a course of bismuth before commencing the use of such intensely acting agents.

Vitamin A is said to be effective in some cases and may be given in 50,000 to 150,000 units daily for a prolonged period. While estrogenic substances have been recommended, their use should be made with more caution. When the involved mucous membrane becomes cracked or ulcerated or thickened and irregular or indurated, positive action must be taken. It is safer to make a biopsy to be sure that cancer has not supervened; if not, affected parts should be destroyed by the cautery or by electrodesiccation, including a very narrow zone of the surrounding sound tissue. Many feel that, because leukoplakia is not very sensitive to radio therapy and since cauterizing doses are necessary, this modality should not be employed. If there is a malignant change, surgery and/or radiotherapy should be used as soon as possible; the draining glands of the neck should be included with these measures.

In the ordinary case without alarming changes simple and preventive measures are often sufficient to restore the parts to a normal appearance. If there is no progression, observation may be all that is required. Tampering with "electric needles" and caustics is inexcusable.

PREVENTION OF CARDIAC DISABILITY

by HOWARD B. SPRAGUE, M.D., Boston, Mass.

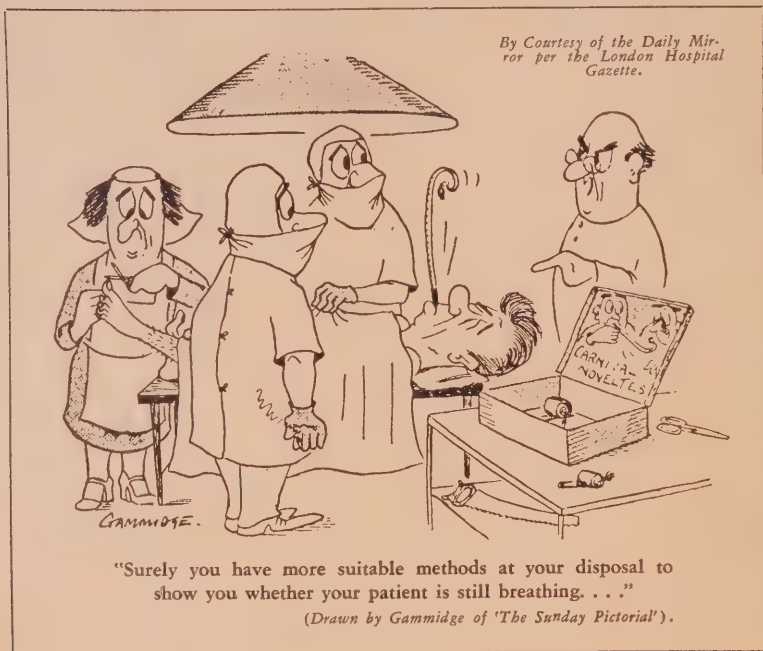
From Transactions & Studies of the College of Phy. of Phila., June, 1948.

While the prevention of heart disease is as yet limited in practical methods, the prevention of cardiac disability can often be attained by foresight or by early therapy. The following are some events susceptible to alteration:

- (1) Infection.
 - (2) Obesity.
 - (3) Emotional Crises.
 - (4) Exposure to cold.
 - (5) Overeating.
 - (6) Prolonged fatigue.
 - (7) Excessive and unusual physical effort.
 - (8) Alcoholic excesses.
 - (9) Sexual excesses.
- It is not unusual to find at autopsy

in old individuals a coronary circulation that has withered, a myocardium with areas of infarction and fibrosis and vessels occluded by chronic arteriosclerosis, and yet in the history there has been no angina pectoris nor recognizable episode of acute coronary thrombosis. Since no one in this audience can tell the state of his coronary intima tonight I believe that he should continue his physical activities at a constant level if free from symptoms. He should avoid the events I have just noted and, if fortunate, he may carry to a long deferred grave a reasonably sclerotic coronary system as a companion to his silent gall stones, his healed tuberculous glands, and his mild cirrhosis of the liver.

There is more to life than increasing its speed.—Gandhi.





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Editorial

DENTAL SERVICE UNDER THE NEW HEALTH ACT

by Don W. Gullett, D.D.S., Secretary of the Canadian Dental Association

DURING the past summer it has been my privilege, as your representative, to investigate dental affairs in Great Britain. The main objectives were to study the new National Health Service Act, which began to operate on July 5 last and to investigate dental education. Both these subjects are extensive in nature and will be dealt with in detailed reports but it may prove interesting to you to hear something in summary form of the new developments in dental practice under the legislation now in force.

The levellers are at work in Great Britain. Socialism in theory and written on paper is, undoubtedly the finest and most plausible system for society but its practical application is something very different. When people can be made uniform and brains socialized then socialism will work superbly.

However, we must not be led astray in thinking that radical changes in health services depend upon the introduction of socialism for such is not the case. The legislation now in force in Great Britain was conceived by a Liberal government, carried and developed by a Coalition government, and only delivered by a Labour government. No one should confuse the issue, as is so generally done, for even here in Canada all political parties are committed to some form of health insurance, state health services or their variations. The great question is what form health services will take and not whether or not a new system will be introduced.

Under the law everyone pays for (free) health services at a set rate by a weekly premium compulsorily exacted. The individual practitioner may choose whether or not he will enter the service. The future of private practice outside of the state service remains to be determined and depends upon many factors, chief of which will be economic. The average dentist is greatly disturbed and young graduates are in the position of not knowing whether it is worth while purchasing new equipment in order to establish a private practice.

It is generally stated that the ultimate objective is to employ all dentists upon a salary basis of payment in health centres. Public statements were made to this effect during the last few weeks. This point is the main bone of contention between the dental profession and the government. It is fully realized that if all or the great majority of the profession once enter the scheme, no matter how generous the arrangement may be, changes may be made at a later date placing the dentist in a very different position. For the present, dentists are allowed to enter the scheme and carry on in their private offices on a fee schedule.

Speaking, more specifically, of the new Act and its effects upon the practice of dentistry in Great Britain we can do little more than make a few general observations here.

Hospitals were taken over completely by the government and made free to everyone. Of course if anyone desires private room accommodation it is available but the first move made by the government was to double the price and as in all other proffered, so-called free, services the price of the free service is not allowed as a deduction in the charge.

The adopted fee schedule is admitted by all to be generous. The minimum fee for a one surface amalgam filling is one pound (\$4.00). If carried over to a second surface the fee increases by 10 shillings (\$6.00). Many look upon this schedule as straight bribery to get dentists into the state service. It is said that after the scheme has operated a few months and costs are known, some new adjustments will occur. Difficulty would be experienced in withdrawing from the state service after once giving up private practice.

The British Dental Association held out for a "grant-in-aid" system of payment which means that the government pays a basic fee and the individual dentist charges his regular fee with the patient paying any difference which occurs. The government flatly refused to consider any such basis of payment and gave several arguments against it stating that it was unfair to the service; that the fee schedule provided for adequate payment; that "grant-in-aid" was subject to abuse and that in countries where such arrangement was in use, it was entirely unsatisfactory. **THE RESULT IS THAT ALL DENTISTS WHO JOIN THE STATE SERVICE WILL RECEIVE EXACTLY THE SAME FEE PER OPERATION.** If the patient chooses to have some type of service other than that allowed the whole responsibility for payment rests with the patient and the government pays nothing.

Medical practitioners are paid upon a per capita basis (a stated amount for each accepted patient per year) but dentists refused to accept this basis of payment. Certain stated dental operations may be performed without prior authority and the account sent in for payment; other operations must have approval before they can be undertaken e.g. the removal of teeth to be replaced by a denture. The basis of payment for dental services is an extremely difficult problem in a state health service and has given trouble in all systems.

Immediately upon the initiation of the state service over 90% of the medical practitioners joined. At the end of the first six weeks of operation approximately 50% of the dental practitioners had signed up. Unless a medical practitioner signed up on July 5th he lost his right for compensation for the loss of his practice which probably accounts for the large percentage entering at the initiation of the scheme. While medical practitioners are not told where they can practise they are told where they can not set up practice (negative direction). No compensation is allowed dentists for the loss of practice nor are dentists given negative direction. Medical practitioners obtained a commitment from the government that they would not be forced to become civil servants but the dentists were unable to secure such assurance.

The arrangement contains many good features and is not opposed in principle by the professional organizations representing the health professions but particular parts concerning the methods are strenuously opposed. The British Dental Association is opposed to the present arrangement and directs its members not to join knowing full well that many will be forced to take part in the scheme. Opposition is based upon the method of payment, the loss of clinical freedom and the fact that no allowance is made to dentists for the loss of practice.

The dental profession in Great Britain was not in a good position to fight for their rights owing to lack of unity within their ranks. Three dental organizations exist and while attempts were made to present a united front they were not successful, a condition which weakened all their efforts.

BOOK REVIEWS

Oral and Dental Diseases, Aetiology, Histopathology, Clinical Features and Treatment, by Hubert H. Stones, M.D., M.D.S., F.D.S.R.C.S., Eng. Prof. of Dental Surgery and Director of Dental Education, Univ. of Liverpool; Hon. Director Liverpool Dental Hospital; Consultant, E.M.S. Maxillo-facial Centre, Broad Green Hospital, Liverpool; Formerly External Examiner in Dental Subjects, Universities of Bristol, Cambridge, Leeds and Manchester; External Expert in Dentistry, Univ. of London; Hon. Dental Surgeon Univ. College Hospital

Dental Department, London. 896 pages. 926 illustrations, 82 in colour. Published by The Macmillans in Canada, St. Martin's House, Toronto, Ontario. Price \$22.50.

This textbook prepared for dental students and as a reference book for dental and medical practitioners is monumental in size and content. To peruse the same is an excellent refresher course in all phases of oral and dental diseases. It is well presented on fine coated paper and having almost a thousand illustrations which tell the story in themselves this book assumes a place of unusual interest.

Particular attention is paid to the aetiology, the histopathology and the more recent research while the clinical features are fully described. This book is the more useful because concise and yet precise instructions for treatment have been included. It is stated that the text fully covers the course for dental students in the subject that is variously called Oral Pathology or Dental Surgery and Pathology in the Universities and Dental Schools of Great Britain, the Dominions and America. A comprehensive bibliography of the more recent literature is appended after each chapter which is a help to the reader who wishes to study more fully any particular subject.

To review this book as it deserves one would have to be a specialist in several fields of dental practice. On the whole this reviewer heartily concurs in most of the statements made. However exception might be taken to a few of the suggested techniques described. For instance in the operation of apicoectomy it is recommended that burs be used to remove the cortical bone over the apex of the tooth while this reviewer believes that sharp chisels used with hand pressure is very preferable. In gingivectomy the instruments recommended are largely those with blades at right angle to the handle while this writer much prefers a straight short sharp scalpel for the very large majority of positions which have to be operated upon; however it is indeed pleasing to note that the author recommends that pockets of over 2 mm. in depth should be eliminated by gingivectomy rather than treated conservatively. It would seem a long time to leave the surgical pack following the operation in position for fourteen days as suggested as we have found that half that time at least is quite adequate in a very large majority of cases.

It is stated that this book embodies the results of long experience in teaching, in examining at various universities and of having access to the clinical material of a large hospital, with which statements one finds it easy to accept. It would indeed be a real acquisition to any dental or medical library.

M.H.G.

Diagnostic Oral Roentgenology, by William E. Rurbeck, A.B., D.D.S., Consultant, Department of Oral Surgery, Robert B. Green Memorial Hospital, San Antonio, Texas; Civilian Consultant Brooke General

Hospital, Fort Sam Houston, Texas; Associate Editor, *Journal of Oral Surgery*; American Society of Oral Surgeons; Past President Southwestern Society of Oral Surgeons; Diplomate, American Board of Oral Surgery; Author, "The Important Lower Third Molar". 236 pages. 345 Illustrations. Published by Dental Items of Interest Publishing Co. Inc., Brooklyn, N.Y. Price \$7.50.

This is a practical book on X-Ray technique and diagnosis written so as to appeal to the average practitioner who is interested in not only producing good radiograms, but also in being able to distinguish the pathological from the normal and diagnosing the case correctly from the changes in the bone and tooth structures. The instruction is concise and specific and should give good results in the hands of the average practitioner.

Part One of this book deals with General and Technical Considerations, Exposure Technique, Roentgen Anatomy and Normal Films. Part Two covers Roentgen Pathology of the Crown, Root and Pulp, Periapical Pathology, Pathology of the Investing Tissues, Impacted and Supernumerary Teeth and Non-Dental Pathology.

The book is well printed and easy to read and should prove of real value to any dentist taking X-Ray pictures which means almost every dentist we trust.

M.H.G.

The Dental Surgeon's Handbook or Modern Dentistry in Daily Practice,

by Marzell Bronner, D.M.D. and Max Bronner, D.M.D., Second Edition. 288 pages, 4 $\frac{3}{4}$ " by 7 $\frac{1}{4}$ ". Published by the Macmillans in Canada, St. Martin's House, Toronto, Ontario. Price \$5.25.

Realizing that the dentist is confronted with an almost overwhelming mass of literature the authors of this book have sought to present the busy dentist with a working handbook dealing in a concise and readily accessible form with the problems and difficulties of chairside dentistry.

The book is in three parts. Part 1 deals with Diseases of Teeth, Mouth, and Jaw; Bacteriology; Materia Medica; Calcification and Eruption Times of Teeth; Blood and Circulation; Diet; Instruments; Vitamins; Weights and Measures. Part II deals with

Orthodontics in Daily Practice, the contents being focused on the requirements of daily practice for the relatively simple cases. Part III deals with Block Anaesthesia illustrated by twelve coloured plates.

It is stressed that this book should not be regarded as a systematic presentation of daily surgery that it has been compiled particularly as a daily reference book for the dentist and senior student rather than the beginner seeking instruction in basic principles. However one could hardly agree with some of the teachings in this book whether for beginners or seasoned practitioners. For instance under the heading of "Caries of the Teeth" and the subheading "Faulty Mouth Hygiene" there are a number of helpful suggestions but on the other hand we could hardly agree that a mouthwash of silver nitrate, 1-100,000 could be favoured as a prophylactic measure nor could we recommend soap as a dentifrice, nor could we condemn the use of toothpicks if properly used particularly in the case of older people with marked susceptibility to periodon-

tal lesions. Furthermore in the treatment of periodontal conditions we could hardly agree that after the patient has passed the thirtieth year and the cusps are not yet ground off this must be done to effect sledge articulation. Such teaching is not in accordance with the views on balanced occlusion held by the periodontists of this continent at least. In the chapter on *Materia Medica* under the heading of monacaine, a $\frac{3}{4}$ per cent solution is recommended while one per cent has been pretty generally used and at present there is a very strong swing towards $1\frac{1}{2}$ per cent.

There are many helpful suggestions in this book but they are not for the beginner as has been stated by the authors and this reviewer would say not for the veteran who is not in a position to evaluate the statements that are made. With these conditions one could peruse this book with interest as much ground is covered in a comparatively small book and in very concise form and one can find many suggestions that are feasible and helpful.

M.H.G.

ROYAL CANADIAN DENTAL CORPS

Colonel E. M. Wansbrough, Director General Dental Services, has just completed his annual inspection of RCDC installations in Western Canada including the Northwest Highway System.

Four officers of the Directorate of Dental Services attended the Field Officers' Course at Petawawa Military Camp during the Summer of 1948.

Captain H. S. Lankin of Brockville, Ontario, has accepted an appointment to the Corps effective 3rd of August, 1948.

Ten applications for commissions in RCDC, Active Force, have been received from Veterans graduating in the Spring of 1949.

During Army Week, 20th to 26th September, 1948, equipment of the RCDC was on display at various centres throughout Canada.

CANADIAN DENTAL ASSOCIATION NEWS

From the Office of the Secretary

Resolution from Alberta Board

The following resolution, as passed by the Alberta Board at a meeting held August 6th and 7th last, has been received:

"WHEREAS the Canadian Dental Association has always been forced to budget for a deficit each year, and

WHEREAS the Association has been unable to build any appreciable reserve fund for any emergency, and

WHEREAS it is evident that demands on the Association are increasing greatly due to the

extension of health services by governmental and other agencies and dentistry's position in all such planning must be maintained, and

WHEREAS in no other way can the necessary money be obtained except through grants from the corporate members,

THEREFORE, be it resolved that, in the opinion of the Board the annual grants from the corporate members of the Canadian Dental Association should be increased to a basis of Twenty-five Dollars (\$25.00) per member of each such corporate member.

The Board of the Alberta Dental Association urges that this resolution shall be forwarded to each corporate member as soon as possible for immediate consideration and this Board pledges itself to increase its annual grant to the above basis any time that the majority of corporate members indicate their willingness to do so in order that the welfare and position of the profession may be assured.

Basic Standards for Dental Services in Approved Hospitals

The Committee on Hospital Dental Services have now issued a detailed statement entitled Basic Standards for Dental Services in Approved Hospitals. This statement contains 15 pages and a copy may be secured by writing The Secretary, 211 Huron Street, Toronto. (English only available at present.)

Owing to the large amount of hospital planning taking place at the present time a demand exists for an outline of an ideal hospital arrangement for dental services. The Committee, after a lengthy study, have produced a commendable statement.

Hospitals throughout Canada are building extensions with provision for a dental department. Many new hospitals are being planned and desire to provide dental services. The recently announced grants by the Federal Government will accentuate this movement in hospital construction.

The Committee on Hospital Dental Services are cognizant of this situation and will endeavour to provide the profession with adequate information in addition to that given in the present publication.

The statement now issued was approved at the recent Annual Meeting of the Canadian Dental Association.

A Dentist with Hobbies

*Reprinted from the Financial Post,
August 7th, 1948*

No one would ever connect the hobbies of Dr. H. J. Merkeley, new president of the Canadian Dental Association, with the dentistry profession. He is a conservationist. Not long ago at \$7.50 each he brought in from Maine a shipment of blueberry plants claimed to be capable of producing a berry from half to three quarters of an inch in diameter.

Merkeley gave the plants to the University of Manitoba. He thought they could be developed. His idea was they could be crossed

with the wild blueberry plants of the rock lands in Eastern Manitoba and Northwest Ontario and a commercial berry produced. An attendant at the university greenhouse, not knowing what the plants were, threw them out.

This is an example of the practical nature and trials of Dr. Merkeley's hobbies. He was a pioneer and perhaps the founder of the honey industry in Manitoba. He was the first beekeeper in the province to produce a honey crop of more than one ton. This was soon after the first world war. His crop was actually three tons. Convinced it could be developed into a business he induced the province's biggest store to catalogue package bees and bee supplies.

This was in fact the start of the Manitoba honey industry, now more than a million dollars a year. It likewise was the start of the package bee business from the southern United States. At least 50,000 packages of bees are imported into Manitoba each spring at a gross cost under present prices of about \$250,000. It is cheaper for beekeepers to import bees each spring than to keep their colonies over the winter.

As for the fur industry Merkeley took a lead role in inducing Hon. John Bracken to develop the muskrat raising in the Summerberry marshes at The Pas. To prove his point he induced 25 Winnipeg business men to put up \$1,000 each to start a muskrat fur ranch. The only assurance he gave them was that they would probably lose their money. Although the project wasn't entirely successful, a lot was learned about muskrats. Merkeley eventually took over the project for the liabilities against it and now has the fur ranch. Last spring he trapped 800 rats on it.

The Manitoba Government eventually did develop the Summerberry marshes and followed it up with fur rehabilitation projects on other marshes. The annual fur crop sometimes exceeds a million dollars. Dr. Merkeley now has the idea that a subsidiary bullfrog industry could be established in the rat marshes. Having recently learned that in Louisiana there is a bullfrog 11 inches long, he is trying to induce the Government to bring some to Manitoba. At \$75 a pair and with no guarantee they can be delivered alive the Government so far has been reluctant to spend public moneys in the venture.

Merkeley has been chairman of the Manitoba Game Commission since it was organized. The commission advises the Government on the wild life situation and its recommendations are usually accepted in setting the dates and bag limits for the waterfowl and upland game-bird shooting seasons. He and a group of associates in 1923 brought from Czechoslovakia one hundred brace of Hungarian partridge, the first ever to come to Manitoba. Hungarian partridge are now well established in the wild life of Manitoba.

As a dentist Dr. Merkeley has the professional conception of the function of teeth in the human economy which is of course shared

by all the 4,800 members of the Canadian Dental Association. Born in 1886 in Chester-ville, south of Ottawa, he attended local public schools and the Collegiate at Morrisburg. An eye injury in his youth put him out of school for four years during which he worked with location and construction surveys for the CPR in Western Canada.

Returning east in 1907 he took his degree in dentistry at Toronto and on graduation in 1911 established himself in Winnipeg. His three sons, one now practising with him, were all in the recent war, one in the Navy, one in the Field Surgical Corps, and one in the Dental Corps. His only daughter is with TCA.

NEWS FROM THE PROVINCES

QUEBEC

Dean Charron Honoured

Dr. Ernest Charron, Dean of the Faculty of Dental Surgery of the Université de Montréal, has been elected a Fellow in Dental Surgery of the Royal College of Surgeons of England in recognition of distinguished service to dentists. This honorary nomination was made at a meeting of the Council held on July 29.

NOVA SCOTIA

Annual Convention

The fifty-eighth annual convention of the Nova Scotia Dental Association was held at the Nova Scotian on August 16-18. Dr. H. M. Eaton, the President, presided at all gatherings.

The clinicians were Drs. Irving Glickman, and H. A. Zander, both of Tufts College, Dental School. The former covered the subject "The Diagnosis of Periodontal Disease," as well as "Recent Advancement in Diagnosis and Treatment of Gingival Infections."

Dr. Zander discussed "Pulp Reaction to Dental Cements," and "Management of Pulp Exposures." Both were very interesting, having been engaged in research in their respective fields.

A symposium on dentures, given by Drs. J. S. Bagnall, W. G. Dawson, and D. C. Eaton, all of Halifax, discussing impression techniques and various phases of construction was instructive and appreciated.

Another much appreciated contribution, was a paper by Dr. C. W. Beckwith, Medical Superintendent, Halifax Tuberculosis Hospital.

Director Tuberculosis Control, City of Halifax.

The following is a list of officers elected:

Dr. Ross Harrington, Bridgewater, N.S.	President.
Dr. G. B. Richmond, Sydney, N.S.	Vice-Pres.
Dr. J. P. McGuigan, Halifax, N.S.	2nd. V-Pres.
Dr. A. B. Haverstock, Halifax, N.S.	Secretary.
Dr. J. A. Tupper, Lunenburg, N.S.	Exec. Member.
Dr. W. C. Oxner, Halifax, N.S.	D.D.C. Representative
Dr. J. W. Dobson, Halifax, N.S.	Alternate.
Dr. V. D. Crowe, Truro, N.S.	C.D.A. Delegate.
Dr. G. M. Dewis, Halifax, N.S.	Alternate.

Oral Hygiene Committee:

Dr. J. H. H. Rice	Halifax
Dr. G. C. MacLeod	New Waterford
Dr. L. B. Layton	Annapolis Royal
Dr. P. S. Christie	Halifax
Dr. J. W. Dobson	Halifax
Dr. G. M. Dewis	Halifax
Dr. R. R. Dalglish	Sydney
Dr. A. B. Anthony	Yarmouth
Dr. G. M. Logan	Halifax.
(Name later changed to Dental Public Health Committee)	

Provincial Dental Board (Three members from Asson.)

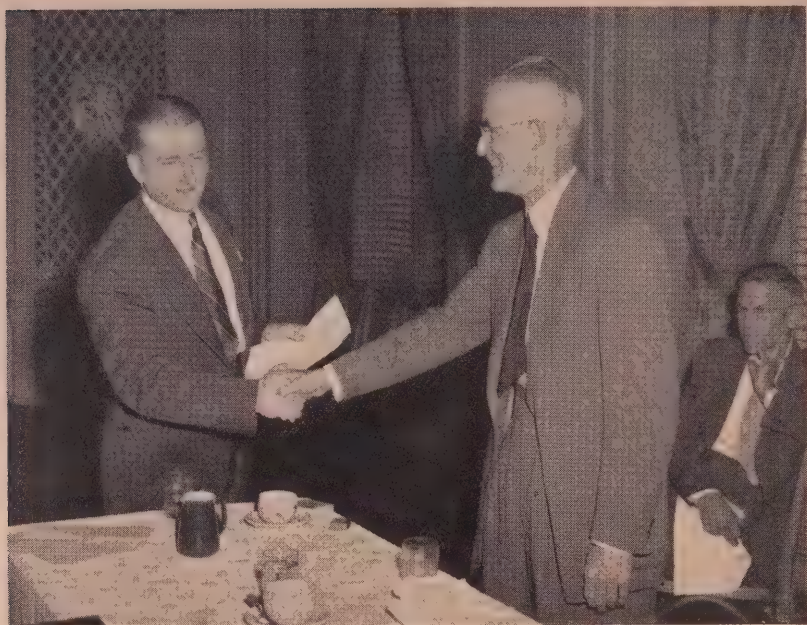
Dr. L. G. Israel	Sydney.
Dr. N. M. Layton	Truro.
Dr. H. M. Eaton	Halifax.
in addition to:	
Dr. S. G. Ritchie	Halifax.
Dr. M. E. Morrison	Antigonish.
Dr. G. M. Dewis, S.R.	Halifax.
Dr. J. H. Rice	Halifax
Dr. W. R. Fraser	New Glasgow.

(New Officers)

Dr. Rice	President
Dr. Eaton	Vice-Pres.
Dr. Dewis	Secy-Reg.

Auditors:

Dr. G. A. Chudleigh and Dr. R. F. Cameron



Presentation and Address by Dr. J. P. McGuigan to Dr. W. W. Woodbury who last year retired as Dean of the Dental Department of Dalhousie University.

Dr. Beckwith resigned from the Provincial Dental Board after many years as President, and almost 40 years on the Board.

The Association approved the principle of licensing hygienists . . . study left to the Board who are to report back at the next general meeting.

The Executive of the Association is to study the possibility of holding joint meetings (clinical) with the N.B. Association in 1949.

The Executive is to look into the possibility of securing Dr. MacGregor, through the government to give a course in Children's Dentistry.

A message of sympathy was sent Dr. Garvin.

Flowers and a note were sent to Dr. Ritchie, a long time member of the Board.

On Tuesday evening a mixed dinner was held in the ball room with a good attendance. The guest speaker was Rev. Harry Rackham. A particularly pleasant feature of the dinner was an address and presentation to Dr. Will

Woodbury, who last year retired as Dean of the Dental Department of Dalhousie University. The following address was delivered by Dr. J. P. McGuigan:

WILLIAM WEATHERSPOON WOODBURY,
B.Sc., D.D.S.

On this happy occasion, we, your sometime students and now colleagues in the profession of dentistry, wish to convey to you our heartfelt greetings, and our deep appreciation of your long and faithful service to our profession both as practitioner and teacher and of your deep and abiding interest in good citizenship.

In 1905, you graduated from Dalhousie University, of which you have since been a loyal alumnus. Proceeding to the Philadelphia Dental College, you entered upon the studies for your chosen profession, graduating in 1908. On your return to Halifax, you were appointed general demonstrator at the Maritime Dental College, and in 1910, so successful had you been as a teacher you were made Professor of Orthodontia and a demonstrator in the Dental Infirmary. When the Maritime Dental College became the Faculty of Dentistry in Dalhousie University, you continued as a member of the

Faculty your teaching being interrupted only by your service in the Canadian Dental Corps during the First World War. In 1920, you began your specialized work in Orthodontics. The high standards that you maintained in the dental profession were recognized by your colleagues, who honoured you with the Presidency of the Provincial Dental Board of Nova Scotia from 1928-1934, and the Presidency of the Canadian Dental Association, 1940-1942. Your outstanding ability was rewarded by Dalhousie University in 1935 when you were appointed Dean of the Faculty of Dentistry, a position that you filled with distinction, both as a teacher and administrator, until September, 1947. None of these honours were of your own seeking, they came as tributes to your long, unselfish devotion to your profession and your university.

In the wider fields of citizenship you have also set high standards. Your service in the First World War bespoke your patriotism and your sensitiveness to the sufferings of mankind. For many years you served on the Boards of the Y.M.C.A. and of the School for the Blind. Here, too, the confidence of your fellow Governors in your integrity and leadership revealed itself in their entrusting to you the Presidency of both Boards.

Today, Sir, we honour you as a distinguished citizen, teacher, and member of our profession. It is our wish that you may live long to enjoy more leisure than your sense of duty and the trust of your fellowmen have allowed you in the past. By your example you have set high standards for us, your students. As the years go by, we shall be ever more aware of our debt to you as teacher, exemplar, citizen and friend.

A pleasant feature of our Provincial Meetings is the increasing number of wives in attendance. Mrs. H. M. Eaton gave a tea one afternoon for Mrs. Zander and the wives of the out of town members of the Association. In addition a number of the Halifax dentists and their wives entertained privately in the evenings.

Also we were glad to welcome an increasing number of conferees from New Brunswick.

BUSINESS MEETING OF BOARD

At the last business meeting the Dental Board was instructed to approach the Provincial Government regarding the appointment of a Director of Dental Service for this Province.

Two government trailers have been in operation in rural districts for several months.

By resolution this Province will contribute ten dollars per dental capita annually to the Canadian Dental Association. w. c. o.

NEW BRUNSWICK

Saint John Dentist Named to Head New Provincial Division

The Hon. Dr. F. A. McGrand, provincial Minister of Health and Social Services, has announced that Dr. Robert S. Langstroth of Saint John has been named Director of Dental Health for the province.

The function of the Division of Dental Health is to coordinate the dental health program of the dental society closely with the department of health, the department of education and local boards of health. The new Division will act in an advisory capacity as well as make use of present dental facilities.

Dr. Langstroth was graduated from the Royal College of Dental Surgeons of Ontario in 1929. He joined the Canadian Army Sept. 1938 and served throughout the war, proceeding overseas in December 1939. He rose to the rank of Lieutenant-Colonel becoming officer commanding No. 6 Dental Company, 4th Canadian Armoured Division. He was named district dental officer and O.C. No. 27 Dental Company in May 1945, and received his discharge in February 1946. He then became district supervising dentist with the Department of Veterans Affairs until August 1948.

MANITOBA

Dental Nurses and Assistants' Association

The opening meeting for the season of 1948-49 of this Association was held at Moore's Sept. 13 with Miss Kay Hoffard, the new president, in the chair. Sixty-five members were present. Miss Marion Smith conducted a sing song to wind up the social evening.

F. J.

ALBERTA

Alberta Dental Association Officers

The following are the newly elected officers of the Alberta Dental Association:—

President: Dr. Ross Gibson—Medicine Hat

Vice-President: Dr. A. C. Ahrens—Lethbridge

Secretary: Dr. R. A. Rooney—Edmonton

Board Members: Dr. W. E. Addinell—Edmonton; Dr. W. E. Janzen—Wetaskawin;

Dr. A. C. Steeves—Calgary; Dr. H. Baden Powell—Calgary.

Representative to Dominion Dental Council:

Dr. Henry Freeland—Calgary.



The conferring of the F.D.S.R.C.S., Eng. upon Dean Ellis of the Faculty of Dentistry, University of Toronto, by Lord Webb-Johnson, President of the Royal College of Surgeons of England.

ONTARIO

Toronto Academy of Dentistry

ANNOUNCEMENT

This Academy opens its 1948-49 program with a dinner meeting at the Royal York Hotel on October 21 at 7 p.m. The Honourable Paul Martin, Federal Minister of Health and Welfare, will be the speaker.

On November 11 Dr. D. W. Gullett will be the speaker. He will report on his trip to England. The meeting will be held in the theatre of the Royal Ontario Museum.

Winter Clinic date is November 25.

Eastern Ontario Dental Association

This Society held one of its most successful conventions on September 19, 20, 21 from the standpoint of registration, congeniality and excellence of clinicians.

As a sort of preamble to the meeting about 20 golfers teed off at the Ottawa Hunt Club for the enjoyment and friendliness of this great game. The winning contestants included Drs. H. Smith, Chambers, Laurin, Mulvihill, McKerracher, Tario, Derrick and Price. Prizes were presented at the closing banquet by Dr. Lorne Barnabe.

Following the golf, a musicale was held in the evening at the Convention Hall of Chateau Laurier. The hall was filled to capacity with those gathering to attend the convention and their friends. The Lyre Club, a mixed choral group from Glebe Collegiate, Ottawa, under the direction of Mr. Robert McGregor presented a program of several numbers and this was followed by a piano solo by Miss Sandra Coupal. It was a delightful musical evening and provided an opportunity to meet old friends.

President Dr. George Barrett presided at the opening of the convention punctually on the appointed hour. After his brief address he called on Dr. Lorne McLachlan to present Dr. R. O. Schlosser, of Northwestern University. Dr. Schlosser, chose as his theme "The Advantages of Conservative Procedure in Immediate Denture Prosthesis." He worked and lectured for three convention periods and carried his case through completely from impression to insertion. His ability as a clinician and lecturer is beyond dispute and when away from his work he showed himself to be a good fellow as well, so much so that he can now add quite a few more names to his list of friends.

The noon day luncheon of the opening day was graced by the presence of the ladies and was featured by an address by the Rev. Minto Swan of Kingston who gave a very entertaining address under the theme "A Place for Wit and Humour in Life". Dr. Geldert, acting Mayor of Ottawa welcomed the visitors to the city and exhorted the dentists to tell the public what they are doing and urged them to take advantage of every opportunity to improve public relations.

The afternoon of opening day featured table demonstrations by dentists and dental nurses and a visit with the exhibitors. All were well patronized and were a very interesting part of the convention program. The thanks of the convention goes to all who gave of their time and effort to participate.

The Public Health dinner meeting was addressed by Dr. George Clark: He said that 7000 school children had been examined in Ottawa and that 85.5 per cent exhibited defective teeth. He tried to point out that the issue of public dental health was a long range affair and that it might be years before the present work bears fruit. He urged all dentists to do more service for children. Among those present at this dinner were Dr's D. W. Gullett, T. R. Marshall, H. Swales, Hugh McLaren, John Day and D. G. Johnstone.

The Sessions of the second day of the convention were featured by presentations from Dr. P. G. Anderson, Professor of Operative Dentistry, University of Toronto. His subject was "Operative Procedures in mouth care." There is no need to elaborate on Dr. Anderson's ability as a clinician—anyone who has ever heard him will heartily concur in this.

A second essayist of the day was Dr. L. M. Hampson who presented a short, concise and informative discussion entitled "Recent Advances in Anaesthesia."

During the business meeting Dr. Sparks of Kingston presented the report of the nominating committee which was approved. The new officers of the association are:

President Dr. Aimé Couture
Past President Dr. George Barrett
Vice-President Dr. I. F. Calder
Secretary-Treasurer Dr. Paul Côté
Advisory Board: Dr's G. W. Barrett, A. A. Antoni; H. N. Beach; W. S. Flora; F. F. Kemp; J. D. Mandeville; E. S. Macartney; K. J. Paynter; T. A. Provost; H. A. Stewart and W. H. Pritchard.
Auditors: Dr's W. C. Macartney and S. W. Bradley.

Dr. D. W. Gullett, Secretary of the Royal College of Dental Surgeons and Dr. Murray Purcell, District Representative, addressed this meeting touching points vitally important to the profession to-day.

The closing banquet of the convention was held in the Quebec suite of the hotel and was featured by an address by Hon. Russell Kelley, Minister of Health in the Province of Ontario. He demonstrated a ready wit, good humour, deep philosophy and a sound knowledge of his job in the Department of Health. Good Eastern hospitality prevailed all during the dinner meeting; the food was good and the company in gay mood—truly a fine setting for a good time.

The ladies' committee too was always on hand as hostesses to visiting ladies and from all reports everyone truly enjoyed a good three days.

What a Convention! and mark you, it gets better each year. A. A. ANTONI

Northern Ontario Dental Association

The setting of the annual meeting of this Society was at Haileybury, Ontario on September 11. President Dr. W. R. Somerville and his able executive had arrangements well in hand for a fine meeting and everyone seemed to enjoy the program for the day.

Dr. Wilbur Amy of Toronto was the guest clinician for the day and in the words of one observer, "He excelled himself."

There was a total registration of 60 including ladies and other guests. Members were

present representing most of the districts in the north, including Timmins, South Porcupine, Kirkland Lake, New Liskeard, Cobalt, North Bay, Sudbury, Chapleau and all surrounding territory. Dr. Theberge was a new member from Temiskaming, Quebec. It is hoped that more confreres from Northern Quebec will attend next year.

The guests of the meeting included Dr. Thomas Cowling, University of Toronto representing the Faculty of Dentistry and Dr. A. R. Poag, President of the Ontario Dental Association. Letters and telegrams were received from the various members of the profession extending good wishes and felicitations.

The 20 ladies attending the convention had luncheon at the Hotel Haileybury and this was followed by a cruise on the beautiful Lake Temiskaming during the afternoon.

The day closed with a dinner dance at the Golf and Country Club. If the success of the meeting can be judged by the enthusiasm with which the members and their friends enjoyed themselves, then it was a good day. This can be appreciated best by those who have visited the north—those unable to be present will not know what they missed until they come next year.

The new executive for 1948-49 are as follows:

President Dr. W. R. Foster, North Bay
Immediate Past President Dr. W. R. Somerville, Haileybury

Vice-President Dr. V. Fournier, Sudbury
Secretary-Treasurer Dr. A. Torrance, North Bay

N.O.D.A. Public Health Representatives
 Dr.'s W. Burgman, Kirkland Lake; A. R. Kaukinen, Sudbury.

1949 convention to be held in North Bay, on the first Saturday following Labour Day.

WILLARD ARMSTRONG, *Secretary*,

Program, Ladies' Auxiliary, Toronto September 1948 to April 1949

September 16th, 12.45—LUNCHEON
 Boulevard Club, Lakeshore Blvd.
 MRS. F. E. WRIGHT, Canadian Association
 of Consumers

October 21st.—MEMBERSHIP TEA, 3 to 6
 At the home of Mrs. A. D. A. Mason,
 7 Schofield Ave.

November 18th, 12.45—LUNCHEON
 Royal York Hotel, Dining Room 9
 MAGISTRATE O. M. MARTIN, "Conditions
 Among Our Indians in Canada" (Convened
 by the East Group)

*November 29th, 8.15—ILLUSTRATED TRAVEL
 LOGUE*
 Ontario Museum Theatre
 DR. A. I. WILLINSKY, "Trinidad Trails"
 (Proceeds Dental Clinic Project)

January 19th, 12.45—LUNCHEON
 King Edward Hotel, Vanity Fair
 MRS. KATE AIKEN, subject to be selected
 (Convened by the North Group)

February 19th, 2.30—AFTERNOON BRIDGE
 Robert Simpson Co., Arcadian Court

*March 17th, 2.00—AFTERNOON MEETING AND
 TEA*
 Prince Arthur House, 145 St. George St.
 BOOK REVIEW, to be selected
 (Convened by the West Group)

April 28th, 12.45—LUNCHEON
 Royal York Hotel, Dining Room 9
 Annual Meeting and Election of Officers

BOWLING—Mondays, 1.30 p.m.
 Olympia Gerrard Bowling Club,
 385 Yonge St.

Academy of Dentistry Winter Clinic, November 25th

The Academy of Dentistry invited you to attend their Annual Winter Clinic to be held at the Royal York Hotel, Toronto, on Thursday, November 25, 1948, from 9 a.m. until 10 p.m.

The committee has endeavoured to make the day a comprehensive review of all phases of dentistry. There will be two limited attendance sessions.

1. Gold Inlays by Dr. Philip Modjeski, Richmond, Virginia.
2. Review of the Pitfalls of Oral Surgery by Dr. John Gerrie, Montreal.

Group Clinics will cover the following phases of Dentistry:—

Gnathology—A Practical Concept: Drs. S.

A. Clappison; O. J. Yule; C. Moses.

Examination of the Child Patient: Dr. S. A. MacGregor.

Practice Management: Mr. H. Cavill, Montreal, Que.

Relief and Control of Pain: Dr. W. D. Davidson, Newfane, N.Y.

Indirect Resection: Dr. G. C. Hare.

Amalgams: Dr. J. Kreutzer.

Dental Studies of North American Indians:
 Dr. Wm. McIntosh.

Silicates: Dr. F. Pearson.

Othodontia: Dr. W. K. Shultis.

Dental Public Health: Dr. G. T. Mitton.

Full Denture: Dr. R. L. Twible.

X-ray: Dr. R. E. Diprose.

The table clinics as well as the commercial demonstrations will be in the Banquet Hall and will cover various phases of dentistry.

The Luncheon speaker will be John Fisher of Canadian Broadcasting Company, fame and entertainment at dinner will be supplied by "The Imaginettes".

A before dinner interlude will consist of the American Air Lines travelogues: "Wings to Viking Land And Skyway to Mexico."

It will assist your committee if you will return registration form properly filled in as soon as you receive your program.

EMPIRE NEWS

GREAT BRITAIN

National Health Service

"In shelters, fo'c'sles, barrack-rooms, and other places of common resort, the talk often turned to the shortcomings of society. 'But it will be different after the war,' we used to say. And in the anxious winter of 1942 Beveridge showed how it might be made different—how the nation could ensure that all its members whether old or young, ill or unfortunate, should have a basic minimum of food and care. Being older and wiser, we now know that in times like these even social security is insecure; its money benefits would quickly be made worthless by inflation or external bankruptcy, and its stabilizing influence in time of trial has to be weighed against its possible effect in discouraging effort when effort is so badly wanted. Moreover, in seeking Freedom from Want one may lose other freedoms, and Britain's recent advances towards Equality and Fraternity have been made at some cost to Liberty. The balance proper to our day and generation is hard to strike, and it may be long before we reach equilibrium. Yet with all these reservations it is certainly a source of strength to a country for its people to feel that, in peace as in war, the necessities of life will be shared according to need; and we can all be proud at least of the impulse behind the legislation that comes into force July 5.

"The new arrangements confer a great benefit on medicine by lessening the commercial element in its practice. Now that everyone is entitled to full medical care, the doctor can provide that care without thinking of his own profit or his patient's loss, and allocate his efforts more according to medical priority. The money barrier has of course protected him against people who do not really require help, but it has also separated him from people who really do: and only time can show the rela-

tive proportions of the two classes. But though, as we hope, removal of this barrier will help to bring medicine to those who need it most, a truly satisfactory application of medical knowledge and resources demands much reorganization and development both in general and hospital practice. Given time, the rationalization of hospital services under State ownership should mean real progress in applied medicine, and anyone who has studied the membership of the boards and committees charged with their management must agree that our profession has been given a full opportunity for leadership. If we continue to think of the National Health Service as a State service it will fail; but if we recognize it as our own service we can make it a great and increasing success. For this we shall require all the sense of duty that training and tradition can inspire, and the result will ultimately depend on the standards of the teaching schools. But our tradition is strong because it is a good tradition; and it will prevail."

Editorial "Our Service," *The Lancet* 255: 17 July 3, 1948 per-Public Health Economics

Modification of the Means Test

"One of the changes instituted in Great Britain on July 5 was a considerable modification of the means test. This is but one of several social and health enactments effective that day and is a fundamental departure from the traditional basis of determining indigency status. A national assistance board is being set up to deal with unemployment assistance, outdoor relief, supplementary pensions, blind assistance, and tuberculosis treatment allowances. There will be no household means tests and the resources and the requirements of applicants will be considered jointly. The incomes of sons and daughters will not be taken into account. The first £375 (\$1500) of

war savings will be ignored as will also other capital to the amount of £75. If £75 or over, but not more than \$400, weekly assistance will be reduced by 6d. for the first £75 and 6d. for each additional £25.

"This is a much more sensible procedure than the one followed here where, in so many instances, a municipality may refuse to consider a person indigent because of some equity in property—equity which could not be realized without considerable loss. The means test, although seemingly justified, actually has penalized the thrifty poor who have been denied assistance because they had invested their small savings in a home instead of squandering it on liquor or the bookie. One dubious angle to our ever-spreading floor of social security and protection is the tendency to pauperize the large stratum of society which would delight in that experience. So many influences today, social and legislative, discourage any measure of thrift, thus swelling the ranks of those who will support any wild-cat scheme that will promise them something which they have not earned. This action of the government would seem sound."

—Editorial, "Britain Drops Means Test,"
Canadian Hospital 25:25 July, 1948 per-
Public Health Economics

The New Era

Superficially the first month of the new health service has passed uneventfully; not because it is working particularly smoothly,

but simply because of the Englishman's innate gift of making the best of a bad job. Fortunately there are no epidemics at the moment, but even so general practitioners' surgeries are crowded. Pharmacists are working overtime trying to keep pace with the mass of prescriptions flooding their shops. Hospital staffs are carrying on as usual, pending a final decision as to the scale of salaries to be paid to consultants. Surgeons are finding relaxation in studying the Ministry's attempts to classify operations on a financial basis, and wondering why an operation for thyrotoxicosis should be paid for at a higher scale than one for a adenoma of the thyroid irrespective of the severity of the latter from the operative point of view. The lay administrators of hospitals are just managing to keep their heads above the shoal of papers, forms and instructions with which they are being inundated, while the newspapers are full of advertisements of vacancies for finance and administrative officers of all descriptions to run the hospitals now that they are under the control of the State. Student nurses from six East London hospitals have refused to accept the proffered scale of salaries and have informed the Minister that if their request for a meeting to discuss the matter is refused they will hand in their resignations.

Out of this chaos will presumably come order, and when it does the credit will be due (though almost certainly not given) to the doctors of the country.—*Canad. Med. A. Jour.*, Sept., 1948.

GENERAL NEWS

Aptitude Tests

Successful use of aptitude tests to forecast the progress or failure of dental students is reported in the *Journal of the American Dental Association*.

Dr. Shailer Peterson, director of educational measurements for the Association's Council on Dental Education, described results of the first two years of a five year program designed to provide a basis for selecting dental students.

Under the direction of Dr. Peterson, a former assistant professor of education at the University of Chicago, tests were given to nearly 6,000 beginning students at 39 dental schools during the past two years. The tests covered

general intelligence, reading comprehension, correctness and effectiveness of expression, object visualization and carving dexterity.

The program is believed to be the most comprehensive attempt of any established profession to utilize educational science for advance selection of its future members.

Results to date, Dr. Peterson said, are "proving that the performance of students in dental schools can be predicted with a high degree of accuracy."

He reported that the quality of students entering dental schools is very high, and that only in the English tests did the dental students fail to exceed the averages for freshmen

in four year colleges and universities. In intelligence tests, he said, the average dental student equals or exceeds 74 to 84 per cent of comparative groups of freshmen in liberal arts schools.

Scores of the aptitude tests, Dr. Peterson said, predict in general the grades the dental students are apt to receive in their academic work.

To date, the aptitude tests have not been used as a basis of selection of students. Experimental use of the tests is scheduled to continue for three more years before the complete testing procedures will be recommended for routine use by all dental schools.

In addition to providing a basis for forecasting success or failure of students, the testing program has provided considerable additional data concerning dental students.

During the past year, 12 per cent of the freshmen dental students were sons of dentists. An additional 43 per cent came from homes where the father is engaged in professional or semi-professional occupations. Approximately 25 per cent of the fathers of the students possessed college or university degrees.

The average age of freshmen dental students last year was 25.1 years, 91 per cent were war veterans of World War II, 99 per cent were males, and 44 per cent were married. Nearly one-quarter of the freshmen had completed four years of college work before entering dental school instead of the two years of pre-dental college work required.

Other data collected by Dr. Peterson revealed that nearly one-fourth of the students have some hobby that requires the use of their hands and that 13 per cent have drawing or applied music as an avocation. A third listed active sports such as hunting and fishing as a hobby.

A.D.A. Operating Deficit for 1947-48 Fiscal Year is \$190,539.07

The American Dental Association ended the 1947-48 fiscal year with a total operating deficit of \$109,539.07. Included were capital losses of \$33,969.42 resulting from the sale of securities. Total expenses for the year were \$868,023.51 compared with a total income and recoveries of \$677,484.44. During the year, total general reserves of the Association which include land and building, declined from \$1,207,534.20 to \$1,012,715.13. Net relief

fund assets on June 30 totalled \$695,870.14. The year's total deficit was approximately \$122,000 less than that authorized at the Boston meeting of the House of Delegates a year ago when total budget appropriations of \$1,076,578.46 were approved. The \$122,000 saving was achieved through the cooperation of all agencies of the Association with a request of the Board of Trustees that all activities be held to a bare minimum. Many factors are involved in the increased cost of activities of the Association. Costs have swept upwards in the rising spiral of inflation which is nationwide; membership has increased more than 70 per cent in the past ten years requiring a considerable extension of services; many new activities have been undertaken and old activities expanded. While the financial position of the Association is sound, it is apparent that income will have to be increased or current activities curtailed.—*A.D.A. News Letter*.

Dominion Dental Council Officers

At the regular meeting of The Dominion Dental Council, held at Murray Bay in June the following officers were elected:

Pres.....Dr. A. E. Proctor, Winnipeg, Man.
1st Vice-Pres.....Dr. H. L. Freeland,
Calgary, Alta.
2nd Vice-Pres.....Dr. F. C. Bonnell,
St. John, N.B.
Sec.-Treas.....Dr. A. J. Brett, Regina, Sask.
Representatives on Council—Dr. G. H. Campbell, Orangeville, Ont.; Dr. Heath McIntyre, Charlottetown, P.E.I.; Dr. W. C. Oxner, Halifax, N.S.

Post Graduate Courses

The Thomas W. Evans Museum and Dental Institute School of Dentistry, University of Pennsylvania, has arranged post-graduate courses in the following subjects for the year 1948-9:

Anaesthesia, Dental and Oral Surgery; Ceramics; Complete Dentures; Dentistry for Children; Endodontics; Fixed Bridge Work; Immediate Root Resection; Mechanical Principles of Restorative Dentistry; Oral Diagnosis and Roentgenology; Oral Medicine and Periodontics; Oral Hygiene, for Graduate Hygienists; Partial Dentures; Periodontics; Gold Inlay Restorations; Orthodontics; Pharmacology and Dental Therapeutics.

Further information can be obtained from

the Director of Post-graduate Division, University of Pennsylvania, School of Dentistry, 4001 Spruce St., Philadelphia 4, Penn.

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**New Pamphlet on Fluorides now
Available in U.S.A.**

A new pamphlet on fluoride therapy, designed to acquaint the lay public with the desirability of topical applications of sodium fluoride for all children, has been published by the Division of Dental Health Education of the Council on Dental Health of the American Dental Association and is now available for general distribution. The pamphlet is popularly written and should meet basic ques-

tions of patients regarding the role of fluorides in dentistry. The Division also has just published an attractive new pamphlet for teenagers entitled, "Attractive Teeth for Young Men and Women." New revised editions of two other pamphlets which long have been standard items in the Association's dental health education literature have also been issued in the past two weeks. They are, "Tommy's First Visit to the Dentist," and "X-rays and Your Teeth." Sample copies of all four pamphlets may be obtained without cost from the Order Department, American Dental Association. Special prices for quantity orders will be quoted upon request.

IN MEMORIAM

Stephen Galway Ritchie, of Halifax, N.S., aged 78, died September 8, following a lengthy illness. He received his Bachelor of Arts Degree from the University of New Brunswick and his D.M.D. degree from Tufts College, Boston, in 1900. He practised his profession in Halifax from 1902 until his recent retirement.

Dr. Ritchie was known in the dental profession not only in Nova Scotia but across the Dominion. He was president of the Nova Scotia Dental Society in 1905 and was secretary from 1912 to 1916. He served a number of years on the Provincial Dental Board and was Vice-president of the Board at his death. He was also a member of the committee which re-organized the Canadian Dental Association in 1926. He was an examiner for the Provincial Dental Board, and was presiding examiner of the Dominion Dental Council for the Nova Scotia district.

He was a member of the original staff of the Dalhousie Dental School when it was formed in 1908 and took an active part in college work until his retirement in 1947. He was then appointed professor emeritus of dentistry at Dalhousie. During his association with the University Dr. Ritchie was a member of the Senate for 13 years, from 1922 to 1935. He was a life member of the Nova Scotia Institute of Science. He was widely known as a chess player and only recently was elected honorary president of the Bluenose Chess Club

of Halifax. He was a member of the Church of England and a member of many associations.

Dr. Ritchie is survived by his widow, a son and two daughters.

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George A. Beattie, of Ottawa, Ontario, aged 80, died August 14 following a short illness. He was graduated from the Royal College of Dental Surgeons of Ontario in 1898 and commenced practice in Ottawa in partnership with the late Dr. W. H. Graham.

He was a member of Dominion United Church; and the Scottish Rite and Rose Croix in Freemasonry.

Dr. Beattie is survived by his widow, two sons, a daughter, two brothers and four grandchildren.

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Edgar Culbert, of Toronto, Ontario, died August 29 in his 90th year. He was graduated from the College of Dentistry in Toronto and took post-graduate work in Philadelphia where he secured his D.D.S. degree. For a time he was employed on the staff of the Hospital for the Poor which provided medical and dental care for Toronto's needy. Later he established a practice in the Earls court district.

He devoted himself to the project of co-operation among farmers and was the author of various pamphlets on the subject. He was a member of the United Church. No immediate relatives survive.

Le Journal

DE L'ASSOCIATION DENTAIRE CANADIENNE

VOLUME 14

OCTOBRE, 1948

No 10

SITUATION ACTUELLE QUANT A LA REPRESSION DE LA CARIE DENTAIRE*

Par VINCENT TREMBLAY, B.A., D.D.S., Montréal.

On peut assimiler la carie dentaire à une maladie et, de même que la maladie frappe l'organisme affaibli, ainsi la carie frappe la dent dont le pouvoir de résistance est atteint. En général, on pourra contrôler la carie, si on travaille à diminuer les forces qui aident à la causer, ou si on augmente la résistance de la dent à la carie.

1) *Diminution des forces qui attaquent la dent.*

L'émail recouvre et protège la dent. Il est formé de 98% de matière inorganique, un phosphate de calcium de la forme de l'hydroxy-apatite. C'est une substance très dure et très difficile à attaquer par les acides. Cependant il y a également dans l'émail un composé organique qui peut être soumis à une destruction protéolytique par les acides organiques. Nous allons étudier certaines substances qui ont un pouvoir "inhibiteur" ou neutralisant sur ces acides diminuant ainsi les forces qui attaquent la dent.

2) *Augmenter la résistance de la dent.*

La dent possède une résistance active comme tout tissu organique atteint par un processus inflammatoire. Nous avons la résistance passive qui résulte de l'indes-

tructibilité du substratum minéral. Il apparaît tout d'abord que la dent adulte a peu de résistance active. Cependant, grâce à l'utilisation récente d'isotopes radioactifs, on a pu mesurer la quantité d'un élément comme la phosphore et le fluor qui passe dans l'émail ou la dentine. On a démontré qu'un cinquième de la quantité de phosphore radioactif de la dentine entrait dans l'émail. La dentine, à son tour, ne reçoit que le dixième du phosphore qui atteint l'os alvéolaire. Il semble donc que la résistance active de l'émail est très réduite et qu'il faut compter surtout sur une résistance passive. Quant à la dentine où un nombre plus grand d'isotopes radioactifs passent, on peut postuler une résistance active d'environ un dixième de celle de l'os alvéolaire.

La résistance passive de l'émail réside dans la cohésion de ses molécules. La proportion des éléments organiques et inorganiques rend l'émail plus ou moins attaquant. On a établi par des expériences que le facteur nutrition et particulièrement l'apport suffisant en vitamine D est largement responsable du fait qu'une dent est bien formée tant au point de vue surface qu'au point de vue structure intime. Mellanby prétend que

*Travail, qui a valu à son auteur le deuxième prix du Concours du Mémorial de Guerre, 1948, de l'Association Dentaire Canadienne.

"l'hypoplasie microscopique" détermine la susceptibilité de la dent à la carie. Cependant, la structure microscopique de la dent n'est pas la seule détermination de la susceptibilité de la dent. Parallèlement aux facteurs influençant la structure morphologique, il y a aussi ceux qui constituent la trame chimique. C'est l'arrangement des molécules dans un noyau particulier qui détermine la plus ou moins grande facilité de changements chimiques. Dans les circonstances normales, le calcium et le phosphore de l'organisme se combinent sous la forme d'hydroxyapatite. Les ions fluor peuvent parfois prendre la place des ions "hydroxy" dans le cristal apatite. Nous avons ainsi un émail qui sera plus résistant à la carie puisque formé d'un complexe moins soluble, le fluor-apatite.

La dent a donc une capacité très limitée de résister à la carie par ses moyens actifs ou sa réaction vitale. Probablement que la formation de dentine secondaire ou sclérotique est le seul procédé important de la défense systématique contre la carie. La résistance passive de la dent est déterminée par la perfection de sa structure, par sa composition chimique et par la présence d'éléments à l'état de trace comme le fluor.

Le mécanisme de la carie n'est pas très bien connu et les méthodes de prévention ont été largement empiriques; cependant, seul le test chimique peut déterminer si les méthodes suggérées sont effectives. La théorie de Miller, quoique mise en doute partiellement, reste à l'ordre du jour à cause de nombreuses conclusions qui l'ont encore l'objet de récentes expériences. Beaucoup de points restent encore vrais: ainsi, Robertson a constaté que les micro-organismes sont présents dans les caries. De plus, on rencontre des "plaques" sur les surfaces appelées "susceptibles". Le lactobacille a été trouvé en grande abondance sur les dents à caries actives.

Quels facteurs localisés sur la surface de la dent sont capables de décalcifier la dent? Il semble que théoriquement toute solution qui vient en contact avec la dent et qui a la propriété de se combiner avec le phosphate de calcium peut produire une décalcification de l'émail. Ainsi le

citrate, le tartrate, certaines protéines en concentration suffisante, peuvent diminuer la concentration des ions calcium ou des ions phosphates (i.e. hydrogène ionisé). On a montré qu'un pH de 5 et au-dessous produit la décalcification de l'émail. Certains fruits citrins et certains breuvages ont un pH très bas produisant ainsi de décalcifications qui ressemblent à de l'érosion et non à de la carie.

Le problème posé est l'étude de la situation actuelle de la lutte contre la carie et, il faut reléguer au second plan les mesures prophylactiques qui rendent encore de grands services. Nous ne ferons que les mentionner pour mettre plus en évidence l'état actuel des dernières expériences. Les mesures directes proposées pour le contrôle de la carie sont tout d'abord organiques; c'est le problème de l'immunité qu'il faut toucher: l'immunité est un état de résistance à la maladie. Ce sont des anticorps développés dans le sang qui causent l'immunité. Certains auteurs ont invoqué la présence d'une substance inhibitrice dans le sang et la salive de personnes résistantes à la carie.

L'Université du Michigan a étudié la susceptibilité à la carie. Avec un filtrat de culture de lactobacille on a fait des tests de la peau. On a trouvé que les personnes qui réagissaient au filtrat n'avaient pas d'anticorps de lactobacille dans leur sérum. En marge de ces expériences les sujets avec anticorps dans leur sérum paraissaient immunisés contre la carie et les lactobacilles étaient absents des cultures provenant de leur salive. On prépara des cultures avec deux sortes de bactéries, mais ceci n'aboutit qu'à un abcès ou bien à une certaine réaction.

L'implantation de bactéries a été l'objet d'expériences: la vaccination d'humains avec des vaccins préparés avec des cultures de l'acidophilus isolés de la dentine cariée semblent stimuler la production d'une substance ayant des propriétés d'inhiber la croissance de l'acidophilus dans la bouche. Le nombre de ces organismes a été réduit dans les bouches de 19 sur 20 des patients ainsi vaccinés. Malgré les échecs des tentatives de produire un vaccin contre la carie, il demeure que nous ne pouvons regarder la carie

comme un procédé entièrement local qui ne peut avoir de répercussions dans tout le système.

Dans quelle mesure les agents nutritifs ont-ils une influence sur la carie? La calcification des os et des dents a été reconnue en relation directe avec la richesse en calcium et en phosphore de la diète maternelle. L'effet d'une diète adéquate sur l'incidence de la carie dentaire chez les enfants en croissance a été recherché par J. D. Boyd et C. L. Drain qui ont observé une basse incidence de la carie chez les enfants dont la diète était constituée en lait, crème, beurre, oeufs, viandes, légumes, fruits et suppléments d'huile de foie de morue.

On a reconnu les bons effets de l'addition de la vitamine D à la diète des enfants. L'Ergestérol activé a une relation avec la lumière solaire. B. R. East a analysé le relation entre les heures de soleil par année et l'incidence de la carie dentaire. Avec l'augmentation de la lumière solaire, on a une diminution de la carie. La vitamine A et la vitamine C doivent accompagner la vitamine D dans un programme nutritif pour prévenir la carie. Comme la dent est un phosphate de calcium, la nutrition devra fournir un apport suffisant de calcium et de phosphore pour la formation de la dent. Le phosphore entre dans la composition d'une enzyme, la phosphatase, qui est présente dans les tissus qui se calcifient. Le calcium et le phosphore entrent dans les carbonates et phosphates qui sont des sels tampons maintenant la normalité sanguine. La relation du calcium sur le phosphore doit être de 1 sur 1. Lorsque l'acide chlorhydrique de l'estomac diminue, l'absorption du calcium devient moindre. La vitamine D aide à l'absorption et à la répartition du calcium et du phosphore. A la suite d'expériences, on a administré de la poudre d'os comme source de Ca à raison de 5 gr. par jour. On semble avoir obtenu des résultats dans la prévention de la carie. Le Dr Price a fait des études sur le régime de 14 tribus primitives: il a conclu que leurs aliments contenaient 7 fois plus de Ca que les nôtres.

Parmi les éléments minéraux qui ont des relations avec la carie, on pourrait

classer en premier lieu, le fluor. Le composé chimique principal de l'émail c'est l'hydroxyapatite $\text{Ca}_3(\text{PO}_4)_2 \text{Ca}(\text{OH})_2$. On croit que le fluor soluble réagit avec l'émail pour former le fluorapatite insoluble $\text{Ca}_3(\text{PO}_4)_2 \text{Ca F}_2$. Ainsi, le fluor par sa réaction avec l'émail est présumé produire une surface qui est moins soluble par les acides que la surface originale. Dans l'emploi du fluor, le pH de la solution est aussi important. On a trouvé qu'à un pH plus bas la solution de fluorure de sodium est plus effective. Un pH de 2.6 n'est pas dommageable à la dent pendant la durée d'application topique et rend l'émail moins soluble. On rencontre des composés du fluor dans beaucoup d'aliments et la quantité varie suivant le type et la source de nourriture. Le ciment silicate a une moyenne de 11 à 15% de fluor. La dent cariée a une teneur basse en fluor, l'émail carié en a 0.0069 et 0.0184% de fluor.

La question d'ajouter du fluor à l'eau d'approvisionnement (1 p.p.m.) est un moyen d'aider au contrôle de la carie et s'avère maintenant comme un problème de santé publique. Miller a rapporté, le premier, les effets inhibiteurs du fluor ou de l'iodoacétate sur les caries du rat, basés sur leurs propriétés enzymatiques. Les effets inhibiteurs de ces deux substances se rapportent à un rôle de glycolyse dans le mécanisme de la phosphorylation dans l'étiologie des caries.

Bibby, Cheyne, Knutson, Armstrong et autres ont montré que des solutions de sels de fluorure de sodium et de potassium appliquées sur les surfaces de la dent empêchent la carie. Bibby a de plus suggéré l'usage d'un rince-bouche contenant du fluorure de sodium. L'émail de la dent est dissout dans l'acide lactique et alors le calcium est reprécipité sous forme de fluorure de calcium. Le phénomène doit être élargi pour inclure tout élément qui précipite les sels insolubles de calcium comme les oxalates et de plus ceux qui précipitent les phosphates insolubles, comme le barium, le plomb, les sels d'argent; les résultats supportent le fait que tout sel dont les anions forment un sel de calcium insoluble (par exemple l'oxalate et l'ammonium) ou dont les

cations forment des phosphates insolubles (e.g. nitrate de plomb, nitrate de barium) protégeront la dent et réduiront la solubilité apparente de la dent et du phosphate de calcium.

L'addition de peroxyde d'hydrogène au fluor dans un composé dentifrice augmente beaucoup le pouvoir de réduire la solubilité de l'émail. Des couronnes qui se sont développées en présence de fluor montrent une couche d'émail transparent et hypercalcifié. En contact avec une dent qui a fait éruption, le fluor semble demeurer dans les voies organiques jusqu'à ce qu'il soit lavé par la salive. Le fluor prévient les fermentations enzymatiques dans la bouche et empêche la phosphorylation dans la transformation de l'amidon en sucre simple. Un excès de fluor amène la fluorose caractérisée par les dents madrées. Sa toxicité n'est pas encore déterminée. Les méthodes reconnues comme effectives doivent être employées jusqu'à ce que de meilleures méthodes soient établies par la recherche. Les techniques de la dentisterie opératoire ne doivent pas être négligées. Pour que les restaurations dentaires aient un effet curatif, il faut une ablation complète des parties cariées.

Il y a une différence entre la dentine nécrotique qui garde ses caractéristiques histologiques et la dentine envahie. On doit mentionner que la dentine opaque hypercalcifiée apparaît jaune et peut rarement être différenciée de la pigmentation jaune. Elle est dure et résistante à la curette et on doit la conserver. Toute dentine envahie mais non nécrotique, peut et doit être sauvée; spécialement quand il y a signe d'exposition de la pulpe. On enlève la dentine nécrotique et on imprègne de sels de calcium remplissant tous les tubulis. On peut remplacer les sels de calcium par l'imprégnation de solutions métalliques et leur précipitation sous forme de sels de métaux. Dans le cas d'un manque de barrière, quand nous sentons le risque d'exposer la pulpe si nous continuons d'enlever de la dentine, nous arrêtons, asséchons la cavité avec de la benzine. Nous mouillons avec une solution de naccanol et imprégnons avec une solution de chlorure de zinc à 50%

et précipitons avec du ferro-cyanure de potassium à 10%. Nous répétons l'imprégnation jusqu'à ce que l'eau glacée ne soit plus ressentie. Le ferro-cyanure de zinc précipité est insoluble à l'eau et obstrue de façon permanente les tubulis.

Si nous plaçons une base molle d'oxyde de zinc eugénol et un ciment par-dessus nous trouvons après trois mois ou plus de la dentine durcie après l'enlèvement du pansement. Nous devons nous assurer que la pulpe n'est pas nécrotique au moment où nous faisons l'imprégnation. Il nous faut questionner le patient pour nous renseigner de la condition de la pulpe. Si le patient nous rapporte que la dent est sensible au froid, mais ne cause pas de douleurs spontanées, nous pouvons être sûrs que la pulpe n'est pas affectée. Nous n'avons aucun moyen de trouver si la pulpe est au premier état d'inflammation. Alors on doit faire un test électrique. Si le test est encore positif, on peut prendre une chance. Si la dent demeure tranquille durant les trois mois qui suivent et que le test est positif, la pulpe a été sauvée. Si la couche de dentine qui recouvre la pulpe est si mince que la pulpe apparaît rose, nous pouvons encore la sauver par imprégnation. Il nous faut réaliser que le chlorure de zinc est un caustique et coagulant des protéines. Aussitôt qu'il est précipité, il est inoffensif.

Les cavités doivent être asséchées et nettoyées. La substance obturatrice doit être insérée hermétiquement de façon à prévenir la récive. L'effet curatif est obtenu par le contact parfait de la substance aux parois de la cavité. De plus, la restauration aura un effet prophylactique si l'opérateur étend son contour et soigne la morphologie et les contacts. Une dent dont l'anatomie est restaurée, reprend son rôle physiologique dans la mastication.

Il importe aussi de limiter notre consommation de sucre et d'amidons. Les hydrates de carbone sont fermentescibles dans le milieu buccal et sont la source d'une production d'acide lactique: on doit les restreindre au minimum dans notre diète. Boyd a noté l'apparition de nouvelles lésions à la suite d'une diète

triplée en hydrate de carbone. Certains aliments acides dont le pH est aussi bas que 2 provoquent une déminéralisation des dents, particulièrement apparente au niveau des incisives inférieures.

Une autre mesure mécanique qui peut avoir son importance pour le contrôle de la carie c'est l'orthodontie. Il faut surveiller la place des dents sur l'arcade car des dents mal agencées causent des troubles de mastication, rendent l'hygiène difficile, et sont une source de carie. L'orthodontie rétablit l'esthétique et avant tout la fonction. Il faut conserver la molaire de six ans à cause d'une foule de complications qui peuvent en résulter: modification de l'arc dentaire, mal-occlusion, occlusion traumatique, perte de contact. La participation de l'hygiène au contrôle de la carie ne manque pas d'importance. Elle préconise l'emploi de brosses à dents, cure-dents, soie dentaire et dentifrices. On ne va pas jusqu'à dire qu'une dent propre est une dent qui ne carie pas. L'étiologie de la carie est bien plus complexe. Cependant, aurions-nous trouvé le remède contre la carie, il nous resterait encore comme tâche d'assainir les bouches, d'où l'importance de l'hygiène buccale.

La dent, à un certain point de vue, est un instrument mécanique et il est nécessaire que le facteur mécanique intervienne et c'est l'exercice. L'excitation mécanique se transmet à travers les portions dures de la dent jusqu'à la partie molle et nucléée de l'odontoblaste, ou couche odontoplastique, et porte cette dernière à élaborer constamment un nouvel hyaloplasme qui maintient la vitalité de la fibre de Tome et des parties dures de la dent. Ainsi, on devra préférer une nourriture abrasive et détergente à une nourriture molle et ne demandant aucun effort de mastication. La prévention de caries endémiques requiert l'addition dans notre diète d'une certaine quantité de nourriture dure. L'attrition et la carie dentaire s'excluent ordinairement l'une l'autre. Le manque d'emploi amène la déminéralisation et l'ostéoporose.

Avec les procédés chimiques de contrôle de la carie, nous allons étudier quelques substances chimiques qui ont un

rôle quelconque de prévention. On a expérimenté des détergents synthétiques qui ont la propriété d'inhiber la chute de pH qui se produit dans les plaques dentaires après le contact du glucose. Or, a trouvé qu'un rinçage de 2 minutes avec des solutions à 1 pour 1000 de détergents cationiques comme le zéphiran et le phémérol, inhibe la chute de pH dans les plaques minces de 60 à 90% et de 40 à 60% dans les plaques épaisses. La chute de pH en-dessous de ce qu'on peut appeler "le niveau critique du pH de décalcification" (5.0 à 5.5) qui se produit dans les contrôles est prévenu dans la plupart des cas par l'application de ces solutions détergentes.

La méthode de prévention de la carie de Gottlieb se résume comme suit: il bloque les voies d'invasion de la carie avec une solution de chlorure de zinc (40%) qui coagule la matière albumineuse, et ensuite, il applique une solution de ferrocyanure de potassium (20%) qui précipite la masse coagulée en ferrocyanure de zinc insoluble. Il fait précéder par un badigeonnage de benzine et naccanol.

Un autre agent d'imprégnation de surface c'est le nitrate d'argent. Il joue un grand rôle pour l'immunisation des caries débutantes chez les dents d'enfants. La préparation de nitrate d'argent et d'ammoniaque annoncé par le Dr Percy R. Howe en 1917 s'emploie encore aujourd'hui. Dans ce procédé l'argent finement divisé est précipité dans la dentine cariée et retarde le progrès de la carie. Les expériences sur les sels de zinc remédieront au désavantage esthétique de la couleur noire du précipité d'argent.

Nous allons dire un mot des inhibiteurs enzymatiques: le (2 méthyl naphtoquinone) ou ménadione est un composé chimique qui a l'activité de la vitamine K. Parmi les enzymes ou systèmes co-enzymes qui sont nécessaires pour diminuer le taux de formation d'acide dans la bouche, il faut mentionner: l'urée, le nitrate d'argent, l'ion fluor, la vitamine K, le bisulfite de sodium, l'acide iodo-acétique.

On a étudié l'influence de l'urée en concentration variée dans l'élévation de

pH des plaques de bactéries sur les surfaces de la dent et dans les cavités comme neutralisant l'effet des hydrates de carbone. Les conclusions nous indiquent que l'effet des hydrates de carbone pour abaisser le pH des plaques peut être largement enrayé pour une période allant jusqu'à 24 heures par l'application d'urée à une concentration de 40 à 50% pour une période d'environ 4 minutes. On doit remarquer que le peroxyde d'hydrogène n'a que très peu d'effet sur le taux de formation d'acide, mais le peroxyde carbonate ou sodium et le peroxyde d'urée sont très effectifs. L'urée se divise dans la bouche pour donner l'ammoniaque. Le zéphiran est un agent bactéricide synthétique qui s'est montré un inhibiteur puissant dans la formation acide de la bouche. On rapporte que l'acide iodoacétique inhibe les caries dentaires chez le rat. On a eu des résultats en l'ajoutant à la nourriture, mais l'acide iodoacétique dans l'eau potable est aussi capable d'enrayer la carie chez les rats d'expérimentation.

L'iodoacétate a été remarqué comme ayant des propriétés marquées pour enrayer la carie. Cependant, les substances suivantes ont donné aucune indication d'un effet prononcé sur la réduction de la carie: fer, cuivre, zinc, chlorure de calcium, sulfate de sodium, chlorure de magnésium, iodure de potassium, iode libre, thiocyanate, de potassium et une eau potable hautement alcaline. Des expériences ont montré que le nitrate de baryum, le nitrate d'argent, le fluorure d'argent et le nitrate de plomb ont un "effet protecteur" sur la dent entièrement baignée dans l'acide lactique.

La vitamine K est un inhibiteur enzymatique de première importance. L'effet de la plupart des vitamines connues sur les sucres fermentescibles de la salive a été étudié. Seuls le cholestérol "cérophyl," un mélange de vitamines, et peut-être la thiamine stimulent la formation d'acide. La vitamine K synthétique (2-méthyl- 1, 4, naphthoquinone) et la vitamine K naturelle, (2-méthyl- 3, phythyl- 1, 4, - naphthoquinone) inhibent la formation d'acide. Comme la vitamine K est une quinone, on pense qu'il peut

nuire au potentiel d'oxydo-réduction normal des mélanges fermentescibles et ainsi prévenir la fermentation.

Le citrinin, un composé produit par le *penicillium citrinum*, peut aussi être placé dans cette classe, comme il a été établi qu'il a une structure semblable aux quinones, le composé inhibe également la formation d'acide. Avec l'éthyl et le malonate de sodium et l'uréthane, quelques inhibitions ont été observées à de plus grandes concentrations. Le nitrate d'argent a fait l'objet d'études (in vitro) comme un moyen possible de prévention de la carie chez les humains. Parmi un nombre limité de rats, il semble qu'il y ait une réduction significative des caries dû à l'addition de 100 ppm. de nitrate d'argent à l'eau d'approvisionnement. Il s'est fait quelques expériences sur le pouvoir inhibiteur du fer et du cuivre. Un fait remarquable, l'acide thio-glycolique est considéré comme un agent capable de produire la carie. Les rats nourris avec cette substance présentaient une forme rampante de carie.

On a étudié les substances antibiotiques en regard du contrôle de la carie: la pénicilline amène la réduction dans le nombre des lactobacilles acidophiles. Les résultats avec la pénicilline semblent fournir "une nouvelle évidence de l'association du *L. acidophilus* et peut-être d'autres bactéries dans l'étiologie de la carie." On a aussi étudié l'influence des nitrates de l'eau et des aliments sur la carie. Dans tous les cas, on a trouvé que des groupes recevant des nitrates dans leur nourriture ou leur eau d'approvisionnement, avaient moins de carie. Les effets de 1500 ppm. de nitrate sont très prononcés quoique 500 ppm. semblent aussi un facteur de réduction de carie. Beaucoup d'autres enzymes ont un pouvoir "activant" ou inhibiteur comme les agents antibiotiques et ceux de la chimiothérapie. Nombre de produits chimiques dans l'eau ou dans l'alimentation doivent être étudiés pour leur influence possible sur l'étiologie de la carie.

Quatre tests ont démontré la relation qu'il y a entre la nature biochimique de la salive et la carie. La salive des per-

sonnes exemptes de carie a un contenu très élevé en tryptophane. La salive de ces bouches est plus réductive, tandis que celle des bouches où la carie est active a un plus grand pouvoir d'oxydation. L'ingestion de d-1 tryptophane cristallisé change la salive des individus à nombreuses caries de façon à ce qu'elle ait les propriétés enzymatiques de la salive des personnes exemptes de carie. Pour faire suite à ces expériences, on a trouvé dans les bouches exemptes de carie la présence de quantités variables d'amy-lase^a et d'amy-lase^b.

Certains troubles endocriniens, la tuberculose, le diabète mellite, les déficiences alimentaires, la grossesse, la psychose, ont des relations avec la carie dentaire. La radiothérapie peut occasionner des caries rampantes au bord gingival. Contrairement à la croyance populaire, la composition chimique de la dent n'est pas altérée durant la grossesse. La relation entre l'hyperparathyroidisme, et la carie n'a pas été démontrée. Les désordres nerveux, fonctionnels ou émotifs, les maladies infectieuses ne semblent pas avoir de relation avec la carie. L'hérédité constitutionnelle peut avoir une influence, mais inférieure aux facteurs environnants toutefois. L'hérédité influence la forme et l'arrangement des dents sur l'arcade. Des dents mal formées ou mal placées permettent la rétention d'aliments et par conséquent la fermentation acide et la carie.

Un programme de contrôle de la carie doit comprendre des mesures qui regardent d'abord le dentiste:

1. Découverte de la carie à son début et traitement adéquat.
2. Instructions au patient quant à son hygiène buccale.
3. Emploi des mesures préventives reconnues qui ont prouvé leur efficacité.

Pour le patient:

1. La visite régulière de son dentiste.
2. Une diète appropriée, évitant les aliments formateurs d'acides.
3. Un brossage efficace des dents après les repas.

4. Quand le brossage est impossible, un bon rinçage de la bouche après les repas.
5. Réduction des sucres et amidons.
6. Bonnes habitudes de nutrition et repas à heures régulières.
7. Soins et alimentation optimum de l'enfant.

Ce sont là des méthodes reconnues comme effectives et il faut les employer jusqu'à ce que de meilleurs soient établies par la recherche. La prévention de la carie ne conduit pas nécessairement à la santé de la bouche: la prophylaxie régulière et les traitements sont nécessaires. Il ne faut pas se fier à des méthodes hasardeuses et perdre un temps précieux à essayer des procédés sans valeur. Toute méthode doit être acceptée par la profession et le public avant d'être regardée comme effective.

Une sélection s'impose dans les mesures thérapeutiques. Les méthodes de contrôle de la carie ne doivent pas être drastiques ou dommageables. On devra s'arrêter à une solution simple et acceptable par le public. Elle devra couvrir non seulement les personnes qui fréquentent nos bureaux mais tout le public. Le coût du traitement ou des médicaments doit être très bas. On ne devra pas faire de promesses au-delà des faits. Le mécanisme de l'action, du médicament doit être parfaitement connu avant de le recommander pour usage général.

BIBLIOGRAPHIE

- Gottlieb-Method—Zimmerman—J.C.D.A., Feb. 1948, P. 78
 Bibby—Caries Control—J.C.D.A., Jan. 1948, Vol. 14 P. 3
 Gottlieb—B. Journ. Dent. Res. 1944, 23: 379
 Bibby—B.C. Journ. Dent. Res. 1932, 11:99
 Stephan—B.M.S. Miller, B.F.—Proc. Soc. Exp. Biol. Meet. 1944, 55, 101
 Stephan—M. Robert—J. of D. Res. Vol. 22 no 1 p. 63
 Canby—C.P. and Bernier J.L.—J.A.D.A. vol. 29 no 4, p. 66
 Dale, J. Powell—J. of D. Res. Vol. 22, no 1 p. 32
 Stephan, M. Robert and Benjamin Miller—J. of D. Res. vol. 22 no 1 p. 53
 Calandra, J.C. & Pancher—J.D. Res. 23, no 1, pp. 31
 Dreizen Samuel, Arvin, Spies, Carson, Cline, vol. 26, J.A.D.A. no 2 p. 93
 Turner C. & Cromwell—J.A.D.A. col. 22 no 2 pp. 99
 Muhler, J.C. and Grant Van Huysen—J. of D. Res. vol. 26, no 2 pp. 119

Martin, D.J.—J. of D. Res. 27, Feb. 1948
 McClure—J. of D. Res. 21, Feb. 1948
 Van Huysen, F. Van—J. of Dent. Res. vol. 27 (46) Feb. 1948
 Rae, James—J. of D. Res. (21) 52 Feb. 1948

Caries Etiology and Control

Arnold. Role of Fluorides in Prevent—Dent. J.A.D.A. 30, 499-508, Apr. 43
 Atkins, Practical Caries Control—J.A.D.A. 31, p. 353-357, March 1944
 Belding—Practical Control of Dental Caries—D. Items of Int. 66, P. 182-186, Feb. 1944
 Bibby—Fluorine—J.A.D.A. 31, p. 317-321, March 1944
 Branson, C.B.—Practical Fluorine—J.A.D.A. 31, p. 71-76, Jan. 1944
 Wallace, Donald A.—J. of D. Res. (21) p. 76, Feb. 48
 Stephan, Robert—J. of D. Res. (29), p. 96, Feb. 48

Robinson, H.B.—J. of D. Res. (21) 113 Feb. 48
 Williams, Ned B.—J. of D. Res. (21) p. 101, Feb. 48
 Bibby, B.G.—J.A.D.A., Vol. 34, Jan. 47
 Newman—J. of C.D.A. Vol. 13, No. 12, p. 578
 Durand, Charles A.—J. of Can. D.A. Vol. 13, No. 12, pp. 615
 Boyd, Drain—Nutrition Reviews 2-35-1944
 Boyd, Drain, Stearns—J. Biol. Chem. 103, 321, 1933
 East—Am. J. Pub. Health, 29, 777, 1939
 Nutrition Reviews, 4, 213, 1946
 Mills, C.A.—J. of D. Res. 16, 17, 1937
 Nutrition Reviews, 1, 182, 1943
 Ibid 3, 115, 1945
 Howe Percy R.—Dental Cosmos 1917, Vol. LIX, p. 481
 Boyd, J.D.—Nut. Reviews 3, 160, 1945
 Harootian, S.G., D.M.D. W.M.—J.A.D.A. Sept. 43, p. 1396

Traitements dentaires des vétérans, aux Etats-Unis

Le docteur Bion R. East, doyen de la *School of Dental and Oral Surgery*, de l'Université Columbia, vient d'être nommé chef du Service Dentaire du "Veterans Administration." A partir de septembre, le docteur East prendra charge d'un service, qui n'est pas bien connu et qui pourtant est le plus onéreux de tous les rouages administratifs, dont bénéficient les vétérans, puisqu'il s'agit d'une dépense de \$7,001,-514, 365 par année pour le gouvernement américain.

A date, presque un million de vétérans de la dernière guerre ont fait réparer leurs dents aux frais du gouvernement. Le coût total de ces services a été de \$67 millions. La "Veterans Administration" s'occupe présentement de demandes de 291,330 anciens combattants pour des services dentaires gratuits. Un groupe de 200,000 vétérans subit actuellement des traitements, qui comprennent tout, depuis des obturations en amalgame jusqu'aux dentiers complets. En 1947, 657,254 traitements furent donnés, au coût de \$42,698,627. Parmi ceux-ci, 600,400 furent donnés par des dentistes locaux à une échelle de prix fixés à l'avance, et le solde par des dentistes de l'armée.

Seulement à peu près trois cas sur cent sont le résultat de blessures de guerre. Mais les règlements de la VA sont assez élastiques. Tout ancien soldat, dont les dents se sont détériorées durant la guerre, a droit à des services dentaires gratuits. Si des cavités se déclarent ou si d'autres ennuis se font sentir moins d'un an après le licenciement (à condition que le vétéran ait servi durant au moins six mois), l'Etat assume les frais des traitements. L'ancien combattant peut faire traiter ses dents aussi longtemps que besoin il y a, si ces dents ont été traitées dans la première année après sa sortie de l'armée. Le vétéran, qui souffre d'un mal de dent peut attendre quatre mois pour se faire traiter pour rien, ou son dentiste peut attendre, lui aussi, quatre mois pour ses honoraires.





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PAUL GEOFFRION, B.A., D.D.S., A.I.D.O., F.I.C.D., L.C.D. ARMAND FORTIER, D.D.S., L.C.D.

Rédacteur:

GERARD DE MONTIGNY, B.A., D.D.S., M.Sc.D., L.C.D.

397 est Boul. S.-Joseph, Montréal

SPECIALISTES DE LA PROFESSION DENTAIRE

La protection du public et le respect de notre profession demandent une réglementation sévère et juste de l'exercice d'une spécialité en chirurgie dentaire. La dentisterie, à cause de son évolution à peine complétée et du peu d'années de son autonomie, n'avait pas formulé de lois bien précises, jusqu'à ces derniers temps, au sujet de la pratique d'une sphère exclusive de notre domaine. Le champ restreint de nos activités — la cavité buccale — compliquait la mise en vigueur d'un "modus operandi" des spécialités, qui satisfasse tous les intéressés, patients et praticiens. Cette difficulté est quasi-inexistante pour la médecine, par exemple, dont la thérapeutique s'applique à tout le corps et même à l'esprit. Le nombre des spécialités médicales est immense en comparaison de celles du dentiste et ces spécialités ne chevauchent pas aussi facilement les unes sur les autres. Ces formalités doivent être de nature à protéger la population, en permettant une réclame basée sur des qualifications sérieuses et une expérience spéciale et non pas seulement appuyée sur des prétentions personnelles ou des intentions discutables.

Ces lois rendent justice aux méritants et confèrent à notre corps professionnel un esprit d'ordre et de dignité favorable au bien-être de nos patients.

Cette question de réglementation des spécialités étant un sujet de juridiction pour chaque province du pays, l'Association Dentaire Canadienne n'a pu qu'élaborer un plan pour l'éclairement des Bureaux provinciaux.

Voici les grandes lignes de ce plan:

- 1) "Un spécialiste de la profession dentaire est un dentiste diplômé, qui, par des études et une pratique supplémentaires approuvées, a acquis un

savoir d'expert et une habileté spéciale dans un certain domaine et qui confine sa pratique à ce domaine."

- 2) "A la mise en force d'une réglementation, un dentiste licencié, qui, pour une période de cinq ans avant la date d'adoption de ce plan, a limité sa pratique à une spécialité et qui est reconnu par le Bureau comme ayant les qualifications un caractère et une conduite irréprochables, pourra recevoir un certificat de spécialiste, en posant sa candidature et en payant les frais requis."
- 3) "Les six spécialités reconnues sont les suivantes: endodontie, chirurgie buccale, orthodontie, pédiodontie, périodontie, prothèse."
- 4) "Un candidat doit avoir complété un cours de perfectionnement dans la spécialité choisie, dans toute Ecole dentaire ou institution approuvée par le Bureau, cours, qui ne doit pas avoir duré moins de trente-deux semaines ou l'équivalent."
- 5) "Un candidat doit avoir exercé une pratique privée, durant au moins trois ans, avant sa demande d'un certificat de spécialiste."
- 6) "Un candidat doit prouver à la satisfaction du Bureau qu'il a subi, avec succès, des épreuves d'examens équivalentes aux exigences du Bureau, ou subir les examens du Bureau."
- 7) "Un spécialiste doit limiter sa pratique à l'exercice exclusive de sa spécialité."
- 8) "Un certificat devrait être donné par le Bureau. Ce certificat devrait être renouvelé tous les ans."
- 9) "Des frais raisonnables pour l'enregistrement, les examens et l'administration pourront être perçus par le Bureau."
- 10) "Aucun dentiste licencié n'a le droit de s'annoncer ou de s'imposer au public comme spécialiste ou comme spécialement qualifié dans un domaine quelconque, sans avoir dûment rempli les conditions fixées par le Bureau des Gouverneurs."
- 11) "Le Bureau se réserve le droit de faire subir aux requérants des examens et de s'adjoindre des personnes aptes à s'assurer des qualifications des requérants."
- 12) "Tout dentiste, qui a obtenu un certificat de spécialiste et qui exerce comme tel, doit limiter sa pratique à cette spécialité à l'exclusion d'une pratique générale."
- 13) "Le Bureau aura le droit de confisquer le certificat de spécialité, s'il juge, par lui-même, que le possesseur de ce certificat, ou n'était pas qualifié pour le certificat ou a manqué à l'observance des règlements, depuis l'obtention."
- 14) "Une nouvelle demande doit être faite par un spécialiste, dont le certificat a été annulé et qui désire reprendre sa pratique spécialisée."

Ces limites imposées à l'exercice d'une spécialité ne jouissent pas d'une bonne presse dans tous les milieux dentaires. Ces prescriptions ne satis-

faient pas une foule de cas particuliers, où leur application rigide lèse patient et praticien dans leur bien-être.

Nous pensons, à ce moment, à un patient, qui aurait été référé à un périodontiste. Supposons que le dentiste, en traitant les gencives sous anesthésie régionale, se rend compte de l'opportunité de l'extraction d'une dent de cette région. Va-t-il retourner le patient à son dentiste pour l'avulsion de cette dent? Il est beaucoup plus simple, pour tous les intéressés, de procéder sur le champ. Cependant, ce spécialiste manque à l'esprit et à la lettre des règlements, s'il agit de la sorte.

Il est une multitude d'autres occasions, où ces lois créent des ennuis pour tout le monde. Mais il ne faut pas perdre de vue les intentions, qui ont présidé à l'édification de ces lois: elles ont été faites pour l'intérêt général et non pour le bien particulier. Libre aux dentistes, dans leurs relations entre eux, d'une spécialité à l'autre, de s'entendre à l'amiable pour la solution de ces problèmes spéciaux. Nous devons nous réjouir qu'une entente ait été établie au sein de notre profession pour fixer les cadres de la discussion. Ces règlements serviront de base pour des changements ou des amendements futurs, quand leur mise en vigueur et le temps auront permis de juger leur efficacité et leurs défauts.

GERARD DE MONTIGNY.

Dans le monde dentaire

Distinction honorifique pour le docteur Charron

Le docteur Ernest Charron, doyen de la Faculté de Chirurgie Dentaire de l'Université de Montréal, vient d'être nommé "fellow" en Chirurgie Dentaire du Collège Royal des Chirurgiens d'Angleterre.

Cette nomination a été faite à une réunion du Conseil de cet organisme, tenue le 29 juillet. A cette même séance, les docteurs Roy Ellis, doyen de la faculté de Chirurgie dentaire de l'Université de

Toronto, et D. P. Mowry, doyen à McGill, ont aussi reçu les mêmes titres.

Diplômes de maîtrise obtenus par deux confrères

Les docteurs Guy Benoit et R. Debiens, de Montréal, ont obtenu, au cours de l'été, leur maîtrise en sciences dentaires de l'Université Northwestern, de Chicago.

Après avoir subi les épreuves nécessaires, le docteur Benoit a reçu son diplôme en Pédodontie et le docteur Debiens, en Prothèse.



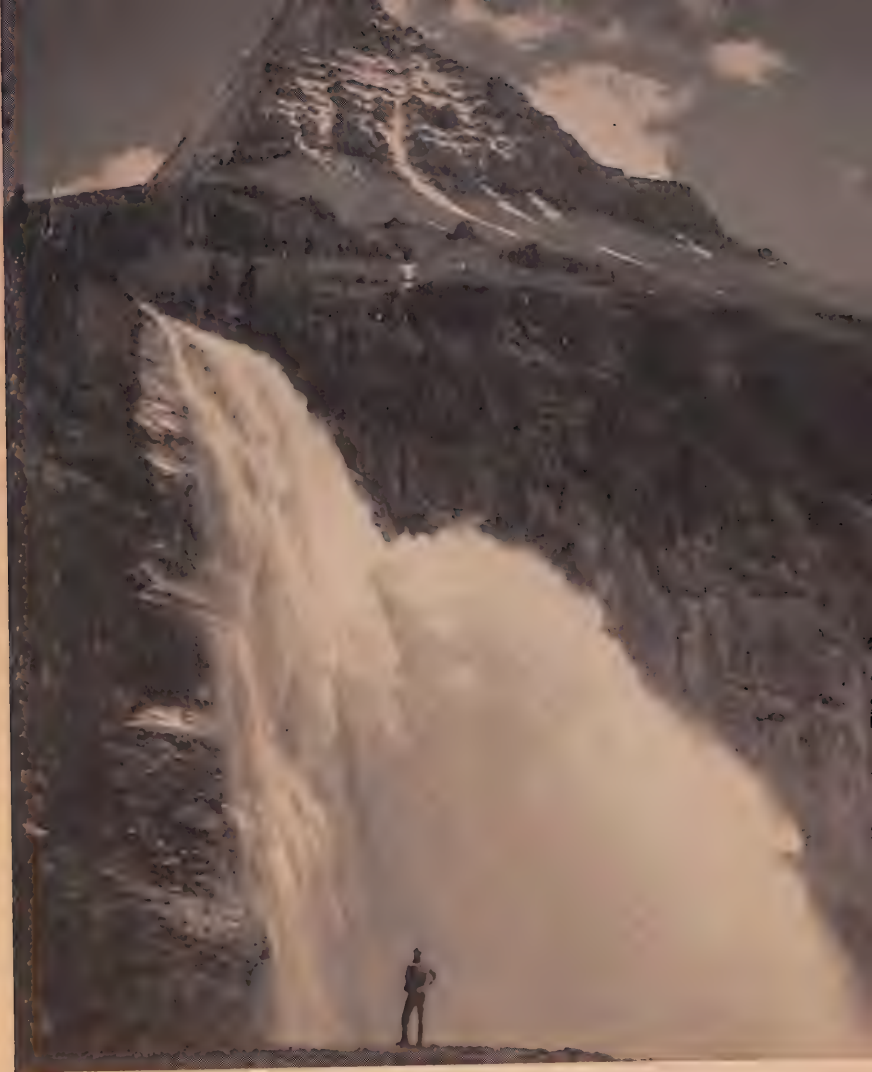
Pourquoi perd-on sa clientèle?

Il peut paraître déplacé, en temps de haute conjoncture, de parler de courbe descendante. Il peut se trouver des confrères assez sûrs d'eux-mêmes et de leur prestige pour négliger complètement le côté psychologique de la clientèle. Un bon travail, une belle installation, et l'on croit que cela suffit, qu'on n'a pas besoin d'égards vis-à-vis de ses patients. On peut les traiter comme des gens qui ne méritent pas de considération, les faire attendre outre mesure et leur imposer impérativement notre point de vue. Si cela dure, c'est bien, mais c'est un jeu dangereux qui ressemble passablement à celui du danseur de corde. Il est courant d'entendre que le patient n'y comprend rien et que, par conséquent, il est inutile de le préparer à ce qu'on projette de lui faire et de lui expliquer le pourquoi de notre conception de traitement. Il ne faut naturellement pas avoir l'air de se justifier ou de s'excuser de recourir à tel ou tel traitement. Cela aurait un air louche et cela irait à l'encontre du but cherché. Un moyen terme consiste en une explication plus ou moins détaillée selon l'intellect de son patient. Nous y trouverons un autre avantage, c'est d'avoir devant nous un patient tranquilisé par la connaissance de ce qui va lui arriver.

Dans les "Brother Bill's Letters", lettres qui ont eu dans les années 1909 et suivantes une célébrité extraordinaire, Clapp, qui a examiné de très près la

marche de milliers de cabinets, attribue la réussite aux explications aimables que le praticien donne à ses patients anxieux. Ce n'est pas une supposition, c'est un fait d'expérience, et il a pu remettre en selle nombre de confrères en les aiguillant sur cette voie.

Le désastre frôlera d'encore plus près celui qui se permet de traiter de haut sa clientèle sans même lui fournir du bon travail. Cela peut durer un certain temps, mais il arrive un jour où cela "craque" brusquement. Quelques gros échecs, une impression de relâchement, l'arrivée d'un nouveau confrère plus jeune et plus attrayant et la chute devient verticale. Si l'on est encore jeune ou dans la force de l'âge, il y a encore moyen de se ressaisir, mais si l'on est plus âgé, les résultats de cette politique sont le plus souvent irréversibles. Clapp, dans un autre article où il analyse les effets de la grande crise des USA sur les médecins-dentistes de New-York, dit que cette période fut fatale aux confrères âgés de bonne réputation. Leurs clients avaient la bouche bien entretenue et il n'y avait plus d'apport de nouveaux clients. D'après ses statistiques, il faut à cette catégorie quatre fois plus de ces derniers que dans les pratiques dites de réparation, c'est-à-dire où les examens et les traitements ne sont pas poussés à fond. Etrange rançon de la qualité, mais cela se vérifie en Suisse également. —Bonsack.



Photograph by J. S. Bricker, D.D.S., Vancouver, B.

THE MONARCH (MOUNT ROBSON) and THE EMPEROR FALLS

More precious far than gold refined
Is Friendship, knit with heart and mind:
Gold may go its fickle way,
But Friendship, tried, will ever stay.—J.S.

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DR. S. J. PHILLIPS,
Oshawa, Ontario.

Governor Canadian Dental Association.

Graduated 1917 College of Dentistry, Royal College of
Dental Surgeons of Ontario. Member of Board of Directors,
Royal College of Dental

Surgeons of Ontario since 1940.

Served with Canadian Army Dental Corps in World War I.
Past President Rotary Club, Oshawa.



FRACTURES OF THE MANDIBLE

by G. A. BUCHANAN, D.D.S., B.Sc. (Dent)

Department of Veterans Affairs, Deer Lodge Hospital, Winnipeg, Manitoba.

IMPORTANT CONSIDERATIONS IN THE TREATMENT OF FRACTURES

IN the diagnosis of fractures of the jaw, and the planning of treatment, it is important that the examination be made clinically, and then verified by reading of x-rays. If one relies on x-ray examination only, or clinical examination only, a fracture may pass unnoticed.

In the planning of treatment, the origin, insertion, and the action of the muscles of mastication are of extreme importance. In consideration of the treatment one must decide which muscles will assist in the reduction of the fragments, and which muscles must be controlled to allow reduction.

Certain points should be considered in planning a method of treatment. The type of treatment should be one that embodies, if possible, all of the following factors:

- (1) Earliest possible reduction
- (2) Complete immobility and retention of maximum number of fragments
- (3) Securing of normal occlusion
- (4) Minimum injury to periodontal tissues
- (5) Simple, quick, yet efficient method.

To minimize the chances of infection, early reduction is of extreme importance. Barclay, Gordon, and Campbell¹ state, "In our analysis, a delay of four days between fracture and reduction, gave marked increase to infection."

It is important to secure complete immobility of the fractured parts to assist in the laying down of bone at the lines of fracture. It is stated by Fry, Shepherd, McLeod and Parfitt² that if the stimulus is too great, the osteoblasts will not be able to grow; in which case the repair will be affected by fibrous tissue. "The view . . . that a 'little movement' stimulates the production of callus is erroneous. Good immobilization has never yet resulted in non-union; all the dangers lie in the other direction of too much movement—too much stimulation."

With these various requirements in mind it is considered that some form of inter-dental wiring, while simple and quick to carry out, can be relied on to produce the desired results in treating the majority of fractures of the mandible. Blair and Ivy³ have stated that at least 90 per cent of all fractures of the mandible, regardless of their location, can be successfully treated by some form of inter-dental wiring.

INTER-DENTAL WIRING

Possibly the three best known wiring methods are the Ivy eyelet, and the Risdon twisted wire techniques; and the contoured buccal wire as originally suggested by Gilmer⁴. The first two methods are of value from the point of view of speed and simplicity combined with effectiveness. Where spaces occur due to missing teeth the use of some form of buccal arch, wired to the teeth, is indicated.

In the cases reported here, the preferred method where all teeth were present was the Risdon technique as modified by Waldron². Where spaces occurred due to missing teeth, the preferred method was a modification of the wire buccal arch method combined with Risdon wiring.

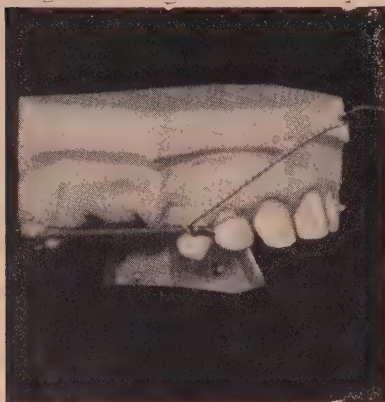


Fig. 1

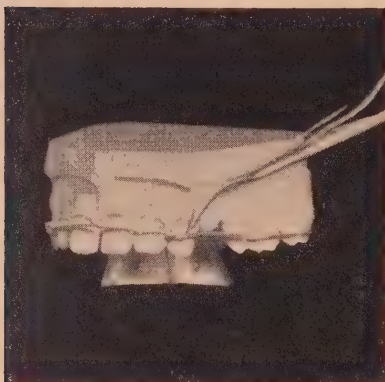


Fig. 2

It was found that the loss of time caused by the contouring of a long piece of wire to reach from molar to molar can be eliminated by the use of a modified method as illustrated in Figs. 1, 2 and 3. Fig. 1 shows a short length of buccal arch wire (half round stainless steel clasp wire 15 x 20) bridging a gap between molar and cus-



Fig. 3

pid. The anterior tie wire also serves as commencement for a Risdon type arch. Fig. 2 illustrates the ending of the Risdon arch and the bridging of another gap with a short length of stainless steel clasp wire. Fig. 3 shows the completion of the wiring. The arch has been fastened to all the teeth, using Angle's brass wire gauge 24. The use of this method combines the good points of the Risdon wiring and the contoured buccal arch, and results in a very firm anchorage. It can be applied quickly with the minimum of discomfort to the patient.

It is considered important that as many teeth as possible be fastened to the wire arch, thus enabling a large number of teeth to share in the load which will be placed on the anchorage. If a number of teeth thus share the load, there will be less stress and strain to the supporting tissues of the teeth, as is the case when a single tooth or pairs of teeth are utilized for anchorage.

When inter-dental wires are being placed in position, attention should be given to a technique which will not injure the gingivae. Before commencement of the wiring, all calculus should, if possible, be removed from the teeth. When the wire is being passed through the embrasures between the teeth it should be kept curved, and pushed

gently, using the haemostatic forcep attached to the leading end as a guide only. If the wire is left straight, and a pulling force only is used, tearing of the soft tissues is bound to result.

ELASTIC TRACTION

Gentle traction obtained by the use of elastics has been found very satisfactory, and is advocated by many^{6,7,8,9,10,11,12}. In a large number of cases, orthodontia elastics were used to exert gentle traction and bring the teeth into occlusion. The rubber bands may be fastened to the arch bar, or hooked over the twisted end of a tie wire, and are carried from one arch to the other in a direction that will exert the desired pull. In most cases it has been found that by this method the teeth are brought into good occlusion within 24 hours. The elastics are then removed, and replaced by tie wires.

The advantage of using elastic traction is that in most cases a general anaesthetic is unnecessary; and if a general anaesthetic is indicated for some operative procedure, the jaw need not be immobilized until the patient is conscious.

IMMOBILIZATION

In the immobilization of the jaw, Angle's brass wire gauge 24 is used. It is looped over the mandibular and maxillary buccal arches and drawn tight by the twisting together of the ends. The direction of the tie wires varies, depending on the direction of force required to retain the teeth in good occlusion.

HEAD BANDAGE

The early application of a barrel bandage as described by Fry¹³ and used until the jaw can be immobilized has been found to be effective. This type of bandage tends to pull the mandible upwards and forwards, relaxes the strain on muscles, and is of some comfort to the patient. If used for twenty-four hours following immobilization of the jaw, it gives the patient some assistance in getting accustomed to the tension on the anchored teeth.

MOUTH HYGIENE

Before commencing treatment, if at all possible, it is important that a thorough prophylaxis be given, and all calculus removed.

Use of an effective mouth wash at least four times a day should be prescribed. In certain cases frequent irrigations may be considered advisable.

The patient should be given direction in the efficient use of his tooth brush, and his co-operation encouraged in the removal of debris which may adhere to the teeth and appliances.

It has been noted that patients frequently have difficulty in freeing all debris from the posterior teeth, as a brush sometimes wedges a particle or particles of food between wire and teeth. It has been found helpful to provide each patient with a device to assist in cleaning between the wires and around the posterior teeth. This instrument can easily be made from a tooth brush handle from which the brush end has been removed. A hole is drilled with a No. 7 bur, approximately one-quarter inch from the end, for the insertion of an applicator. The patient is also provided with a supply of round hardwood applicators and a small quantity of absorbent cotton. He is instructed to sharpen an applicator to a point; apply a very thin layer of absorbent cotton to the pointed end, and wind the cotton tightly by a twisting motion of the applicator. The cotton covered point is then pushed about three-eighths of an inch through the hold in the handle and the long end of the applicator broken off. The patient is also provided with small quantities of liquid green soap and hydrogen peroxide with which the point should be moistened before use. It has been found that the combination of tooth brush, applicator and mouth wash greatly helps in maintaining a clean and comfortable mouth.

CASE REPORTS

Case No. 1—*Cpl. L. K. (Army)*
FRACTURE OF ALVEOLAR PROCESS AND
LOSS OF SEVERAL TEETH

Cause:—Automobile Accident. Man was thrown against steering wheel of car, receiving blow to lips and anterior teeth.

Examination:—Urgent and immediate treatment was required. Patient was first examined while under endotracheal anaesthesia. A long cut in the lower lip had been sutured. Surgeon reported that he had removed many crowns and fragments of teeth embedded in the lower lip.

Examination showed no complete fracture of mandible or maxilla. There was, however, a large triangular, mobile segment of bone, containing the two central incisor teeth and the right lateral incisor, fractured from the mandible and depressed lingually at an angle of 45 degrees. A large segment of maxilla containing the upper right central and lateral teeth was broken and depressed lingually to about the same angle as that of the mandibular fragment, and was very mobile. The teeth in both fragments were quite firmly attached. The upper right cuspid, upper left central, lateral, and cuspid, and also the lower right cuspid were missing as a result of the collision. The crowns of the lower left lateral and cuspid were fractured, tilted lingually, and held in place only by sub-gingival attachment (Fig. 4).

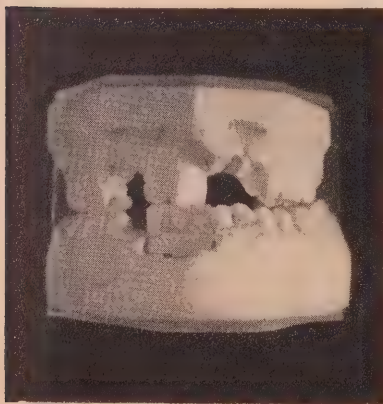


Fig. 4

X-rays could now be viewed, and they verified the diagnosis.

According to the x-rays, the lower point of the mandibular fragment appeared to be well below the apices of the teeth and the roots did not appear to be in the lines of fracture. Small pieces of bone appeared to be broken away from the maxillary fragment.

Treatment:—Lower left lateral and cuspid crowns were removed and the roots extracted. Small loose pieces of bone which would interfere with healing were removed. Penicillin powder was insufflated into sockets and under the torn tissues.

Mandibular and maxillary buccal arches were contoured from half round stainless steel clasp wire. As there were no teeth which could be used for anchorage, anterior to the first bicuspid, the shape of the anterior portion of the arch wires was formed by estimation of the probable original position of the anterior teeth.

Both buccal arches were then securely wired to the bicuspid and molar teeth. The maxillary fragment containing central and lateral teeth was moved labially until the teeth contacted the buccal arch, and the labial and lingual areas of bone were pressed and moulded in position with thumb and forefinger. The central and lateral teeth were then securely wired to the arch wire. This operation was then repeated in the case of the mandibular fragment, and the three anterior teeth which it contained were securely fastened to the lower arch (Fig. 5).

No infection occurred in the mandible. Infection occurred at the site of the maxillary fragment by the fourth day and drainage was maintained at the socket of the upper right cuspid until healing commenced. During this period a few small detached pieces of bone which interfered with healing, were removed.

The complete history of the case cannot be given as the man was well enough to be discharged to his unit at the end of two weeks, and referred to dental officer for further treatment.



Fig. 5

The case is reported to illustrate the need of having at hand a supply of wire which can be contoured and formed into a buccal arch. Obviously no other form of support would have served in this case.

Case 2—K. E. R. (Naval Recruit)

SIMPLE FRACTURE RIGHT MANDIBLE, CUSPID AREA; SIMPLE FRACTURE NECK OF LEFT CONDYLE WITH SLIGHT DISLOCATION

Cause:—Fainted while on parade and standing at ease, striking chin on concrete drill hall floor.

July 27: Admitted to hospital. Clinical examination showed possible fracture of mandible at the right cuspid area, fracture in area of left condyle, fracture of six teeth. The injury to three of the teeth was of a minor nature, the lingual enamel of the upper right first and second molars and second bicuspid having been sheared off but no pulp exposed. The crown of lower right second molar was fractured from the roots and retained by subgingival attachment. The upper left bicuspids were fractured vertically, the buccal cusps and crown portions missing, and pulps exposed.

A barrel bandage was applied.

July 28: X-ray report—"There is a linear fracture of the right mandible

at the canine tooth. The bones of the face otherwise appear negative."

July 29: Prophylaxis given. Physician advised postponement of operation until patient's general condition improved.

July 31: Under endo-tracheal anaesthesia, the roots and remaining portions of crowns of upper left bicuspids, and also the crown and distal root of the lower right second molar, were removed surgically. The mesial root of the lower right molar was left in position rather than place too much strain on the left condyle area, which appeared in clinical examination to be the site of a fracture. Penicillin powder was insufflated into the sockets under the flaps before suturing.

The modified method of Risdon wiring was used on the mandibular teeth and a stainless steel buccal arch was wired to the maxillary teeth.

Aug. 1: Orthodontia elastics were placed between the arches for traction.

Aug. 2: Teeth were in good occlusion. Elastics were removed and the jaw was immobilized by tie wires between upper and lower buccal arches.

Aug. 3: Prophylaxis was given. Tie wires were adjusted and tightened.

Aug. 4: X-ray report: "There is a fracture of the neck of the left mandible and the condyle has been dislocated and displaced forwards. This was not shown clearly on the previous films."

Tie wires were removed and jaw mobilized. The left mandible was drawn downwards and forwards, and gentle manipulation was given in an attempt to improve the position of the condylar fragment. Tie wires were replaced, tightened, and jaw again immobilized.

Routine examinations, wire adjustments and prophylaxes were given.

Sept. 16: X-ray report:—"The alignment of the fractures of the jaw is very good. Position of fragments excellent. Considerable new bone is seen."

Wiring was removed and jaw mobilized. Trismus was present.

Sept. 18: Jaw could now be opened to allow prophylaxis.

Comment:—No infection occurred during treatment and recovery was uneventful.

Case 3—Cpl. K. W. T. (R.A.F.)

FRACTURE AT NECK OF CONDYLE

Cause:—Friendly scuffling in quarters, man falling against metal bed and striking chin on left side of symphysis.

Nov. 6: Clinical examination showed apparent fracture of mandible in the right condyle area and apparently a great deal of displacement. The right angle of the mandible was elevated, causing the right posterior teeth to be in contact first, while the incisal edges of the anterior teeth were approximately 8 mm. apart. Teeth were in disto-occlusion and the chin was deviated to the right side.

The oral condition was poor; gingivae were inflamed, swollen and bleeding to touch.

The upper right bicuspid had been previously extracted. The lower left molar was missing but the second and third molars had drifted mesially, almost closing the space.

Treatment on the day of examination consisted of prophylaxis, gingivae being treated with gentian violet; and a barrel bandage was applied. Mouth washes were prescribed.

X-rays verified the diagnosis and showed a fracture at the neck of the right condyle, with the lower end of the condylar fragment pointing downwards and outwards and overlapping the lower fragment of the ramus.

No. 7: Prophylaxis and gingival treatment were given. A short length of stainless half round wire was used to bridge the upper right second bicuspid gap, and extended from the distal of the right molar and to the mesial of the right cuspid and securely wired to first molar and first bicuspid. A Risdon type of arch wire was used on the left side of the arch, commencing at the upper left first molar and ending at the cuspid of the right side. The Risdon arch wire ended as a tie wire

for additional fixation of the stainless steel arch to the cuspid tooth.

The barrel bandage was replaced.

Nov. 8: The patient now able to open his mouth about three-quarters of an inch. A prophylaxis was given. A Risdon type of arch was now applied to the mandibular teeth. Angle's brass wire was twisted around the lower left first molar and was carried around to the opposite side to be ended at the right molar. The second molars were not used as supporting teeth, as the lower left molar was badly tilted and the crowding of a partially erupted right third molar made the passage of a wire impossible.

Orthodontia elastics were fastened to the maxillary arch on both right and left sides and carried downwards and backwards to be hooked over tie wires of the lower arch.

Nov. 9: Occlusion of teeth was much improved. Elastics were removed and a periodontal treatment was given. The condition of gingivae was also much improved. Elastic traction was replaced between the arches with more tension. The angle of traction was changed slightly to complete the bringing about of occlusion which would be normal for that particular patient. The second application of traction completed the bringing about of good occlusion and the jaw was immobilized six hours later.

Nov. 10: Brass tie wires between maxillary and mandibular arches were removed and a medium hard rubber bite block about 3 mm. thick was placed between the posterior right molars, and anchored to a buccal arch by a short piece of wire to prevent it being swallowed by patient if by any chance it became free. The intermaxillary tie wires were again replaced and the wires tightened to immobilize the jaw. Tension was placed on the wires to bring the teeth which were anterior to the pad, and those of the left side, into occlusion. The rubber block acted as a fulcrum and the ramus of the right mandible was thus lowered. As the larger fragment was lowered, gentle

digital pressure was applied to the laterally displaced condylar fragment with the intention of moving the lower border medially to a position above the larger fragment.

Nov. 11: X-ray report — "There is still angulation of the fracture of the neck of the right mandible. The lower end of the upper fragment is slightly lateral."

Intermaxillary tie wires were removed and the rubber bite block replaced with one of greater thickness (6 mm.). The jaw was immobilized and wires tightened to bring the teeth into occlusion. Gentle digital pressure was applied to the lower end of the condylar fragment. The tension was lessened on the wires, allowing ramus to rise to a slightly higher level and contact the fracture line of the upper fragment.

Nov. 15 X-ray report:—"The alignment of the fragments is now satisfactory."

Comment:—Recovery was uneventful. The rubber pad was removed in three weeks. The wiring was removed and jaw mobilized in eight weeks. Trismus was present on the removal of the appliances, but the jaw could be opened satisfactorily within 48 hours. Movements of the jaw were quite satisfactory.

Case 4—F/O J. D. F.

COMPOUND COMMINUTED FRACTURE OF BODY OF MANDIBLE AT SYMPHYSIS; SIMPLE FRACTURE OF NECK OF LEFT CONDYLE

Cause:—Aeroplane Crash.

Examination showed a fracture of the mandible at the symphysis compounded in the mouth. There were loose fragments of unattached pieces of bone at the site of fracture. The lower left central and lateral teeth were dislodged from their sockets, raised about one-eighth of an inch and tilted lingually. The right and left sections of the mandible were drawn together due to the contraction of the mylohyoid muscles. The level of the incisal edges of the anterior teeth of the right fragment were about 3 mms.

lower than the incisal edges of the anterior teeth of the left mandibular fragment. The buccal cusps of the lower molars were in contact with the lingual cusps of the upper molars, keeping the anterior teeth apart about 8 mms. The lingual wall of the enamel of the upper right first molar was fractured off. The disto-buccal cusp of the upper left second molar was fractured off, and the dentine was exposed to cementum-enamel junction. There was no pulp exposure.

Dec. 7: X-ray report:—"There is a fracture of the mandible just left of the symphysis. The mandible here appears to be fragmented. Alignment is good except the left incisors are elevated about one-eighth inch. There is a fracture of the neck of the left mandible. Position is excellent."

Examination of x-rays confirmed the clinical diagnosis and in addition showed that the neck of the left ramus was fractured but without any displacement of condyle or ramus fragments.

Treatment:—Dec. 7: A barrel bandage was placed in position. The patient was suffering some shock and possible concussion.

Dec. 8: A prophylaxis was given. It was decided that cast splint on the mandibular teeth was indicated.

Impressions were taken of the maxillary and mandibular teeth with an alginate material. Due to the difficulty of access to the mouth the upper impression was taken with a flat type lower tray from which the lingual and buccal flanges had been cut off to a depth of only two mms. Spots of hot flamed stick compound were dropped along the floor of the tray to which the alginate material could adhere. As an impression of the teeth to the gingival margins only was required, it was only necessary to place a small thickness of the impression material on the tray. For the impression of the mandibular teeth the technique was the same except that sectional impressions were necessary, using left and right trays that extended to mid line. The trays with the alginate in place were placed

in the mouth between teeth and cheek and moved medially over the teeth to be then pressed down to place. In upper and lower impressions the resulting lingual portions of the impressions could not be removed without bending, but the elastic properties of the material allowed the impressions to be removed without damage. Casts were then poured in stone.

The lower casts were sawn through in the anterior region and the two parts assembled to correct occlusion with the upper cast. A plaster base was poured to retain the correct position of the lower casts.

NOTE: Although the use of a cast splint on the mandibular teeth was clearly indicated in this case, an unfortunate temporary breakdown in the laboratory services interfered with its early construction. Private laboratories reported that the splint could not be supplied for four or five days. As delay in reduction and immobilization would increase the possibility of infection, an alternative method of treatment was resorted to.

A buccal arch of heavy half round stainless steel wire (13 x 18) was contoured to touch the buccal surfaces of the teeth on the mandibular cast. A buccal arch for the maxillary teeth, was also contoured from half round stainless steel wire but of a light gauge (15 x 20).

Dec. 9: A prophylaxis was given.

Dec. 11: Treatment under endotracheal anaesthesia.

Lower left central and lateral teeth were extracted and numerous small fragments of bone with no attachment were removed. Penicillin powder was insufflated into sockets and under torn tissue.

The upper buccal arch was wired to the maxillary teeth. The mandibular steel arch was wired to the teeth of the left mandibular section. Tie wires on the right side were inserted but were left loose to be fastened later. The left and right sections of the mandible were manipulated manually, and gently but firmly moved to normal po-

sitions using the occlusion of the teeth as a guide. With the teeth in occlusion and an assistant holding the left mandible in position, the right mandible was held firmly in position with the left hand while two of the right tie wires were twisted tightly. It was found that the mylohyoid muscle exerted enough pull to draw the right mandible medially about 3 mms. The two right tie wires were loosened and the right side of the buccal arch was sprung laterally until its position was about 1 cm. from the buccal surfaces of the teeth. The sections of the mandible were again gently manipulated until the teeth were brought to occlusion, and the right side of the buccal arch was fastened to the teeth by tightening all tie wires. This time the spring which had been placed in the buccal arch counteracted the pull of the muscle and the occlusion appeared to be good.

Dec. 12: The depressor muscles appeared to be in tension, as the teeth remained apart, and the patient could close only with difficulty and with the assistance of hand pressure under the chin. Elastics were placed between the maxillary and mandibular arch wires.

Dec. 13: Occlusion was excellent and the muscles were more relaxed. Elastic traction was removed and the jaw was immobilized by twisting of tie wires between the buccal arches.

Dec. 22: X-ray report: "The alignment of the fragments of the jaw is excellent."

Jan. 10: X-ray report: "Alignment of fragment of jaw is very good. No new bone is seen."

During the period of immobilization routine prophylaxes were given and tie wires were occasionally adjusted or tightened.

No infection developed and recovery was uneventful.

The jaw was mobilized in nine weeks and wires removed.

Trismus was present on freeing of jaw but free movements returned with exercise.

Comment: It should be noted that

the type of treatment was not one of choice but expediency. It had been planned to replace the lower wiring with a cast splint, but as the emergency type of treatment worked so effectively it was decided to leave the fragments undisturbed.

Case 5—Sgt. J. A. V.

COMPOUND FRACTURE OF LEFT MANDIBLE THROUGH MENTAL FORAMEN; VERTICAL RIGHT RAMUS FRACTURE WITH GROSS DISPLACEMENT.

Cause: Blow from fist to left side of chin.

June 8: Examination showed a compound fracture of the body of the left mandible posterior to the first bicuspid, with fragments very mobile. The second bicuspid and the first and second molars on the left side were missing, having been extracted at some previous time. The third molar was present and had drifted forward. The third molar being in contact with the upper molars had kept the posterior fragment from displacement. A vertical fracture of the ramus with a great deal of displacement was also diagnosed. The fracture appeared to commence about one inch anterior to the right angle and run vertically through the ramus. The inferior border of the posterior fragment could be felt by digital examination to be well below the inferior border of the anterior fragment, and in a lateral position. The lower border of the right mandible had been forced upwards, and the posterior second molars were in contact while the anterior teeth were about one-quarter inch apart. The mandible was deviated to the right, the mid line between the upper central teeth being directly over the centre of the lower left lateral tooth. Slight swelling was present. The patient stated that little pain was present if jaw movement was not attempted. There appeared to be no damage to the inferior dental nerve as no anaesthesia was present in the lower lip.

X-RAYS: X-rays showed a fracture through the left mandible at the mental foramen with the fragments in

good position but separated by a space of approximately one-eighth inch. X-rays also showed the vertical fracture through the right ramus running from about one inch anterior to the angle vertically up through the mandibular notch. The posterior fragment had been displaced laterally. The fragments appeared to be in contact in the area of the notch but were over one-quarter inch apart for the remaining distance down to the inferior borders. The right body and anterior portion of the right ramus was in an elevated position, and the inferior border of the body appeared to be about 6 mms above the level of the inferior border of the posterior fragment. Fig. 6 shows the position of the teeth and the fractures copied in stone from the x-rays.

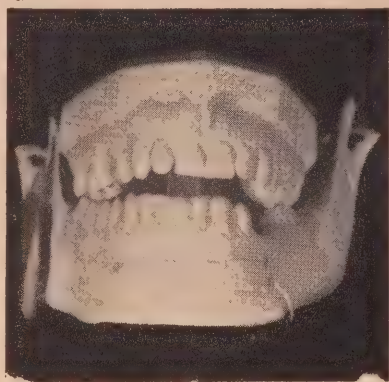


Fig. 6

Prophylaxis was given. A barrel bandage was applied. Mouth washes were prescribed.

June 9: An Angle's plain adjustable band was fitted to the single remaining molar of the left posterior fragment, cemented to place and the nut tightened. Inter-dental wiring of mandibular teeth was completed. This treatment consisted of a combination of Risdon wiring and stainless steel buccal arch. Half round stainless steel clasp wire was contoured to fit against buccal surfaces of the lower teeth from the lower right cuspid to the lower left first bi-

cuspid. The arch was carried distally to approximately the mid-section of the gap and then bent back upon itself for a short distance. The double part of the arch was flattened together but left slightly apart to accommodate elastic or wire. The buccal arch was then securely fastened to all the teeth it contacted with the exception of the lower right cuspid. A short length of Angle's 24 gauge brass wire was then passed around the lower right second molar, the ends twisted together to form a short Risdon arch. The twisted arch was then carried forward to the right cuspid where it was ended as a tie wire for the stainless arch. The Risdon arch was then fastened to the teeth with brass tie wires. The barrel bandage was replaced.

June 10: A prophylaxis was given. Because of the missing upper right second bicuspid, a stainless steel arch wire was placed between the right upper second molar and the mesial of the right cuspid and wired to the two molars and first bicuspid. A Risdon arch was placed from the molars on the upper left side to the right cuspid where it ended as a tie wire for the steel bar. Tie wires fastened the Risdon arch to all the teeth it contacted.

Double orthodontia elastics were fastened to the bolt of the Angle's band, which had been cemented to the lower left molar, stretched and placed over the hook formed by the end of the stainless steel arch. Inter-maxillary traction was applied by fastening elastics to the mandibular buccal arch, stretching them and placing the ends over the twisted ends of the upper tie wires.

June 11: The elastic traction produced satisfactory occlusion within twenty-four hours. Fig. 7 shows elastic traction just prior to removal.

Elastics were removed. A rubber bite block (4mm. thick) was placed between the right second molars and fastened to an arch with a light anchoring wire. Intermaxillary tie wires were placed between the arches and tightened to force the posterior part of the right mandibular fragment downward, using



Fig. 7

the rubber pad as a fulcrum. Digital pressure was applied in a medial direction to the ramus-condylar fragment.

June 12: X-rays showed that the fragments of the left mandible had been brought closer together. The fragments of the right side, however, were still displaced. The outer fragment appeared to be held from moving medially by contact with a step in the fracture line of the neighbouring fragment.

Inter-maxillary tie wires were removed and the rubber bite block replaced with one of greater thickness (6 mm.). Tie wires were replaced and tightened to lower the posterior part of the medial fragment and also bring the teeth anterior to fulcrum into contact. Digital pressure was again applied to the angle of the ramus-condylar fragment.

June 13: X-rays showed the fragments were now in good position. Fig. 8 shows inter-dental wiring, jaw immobilized, and reduction of fractures. Fig. 9 shows position of bite block.

Comment: It would appear that with the ramus fracture, the line of fracture on the outer side of the ramus was anterior to the masseter muscle attachment; and on the medial side the fracture line would appear to have been anterior to the attachment of the internal pterygoid muscle. Thus, when

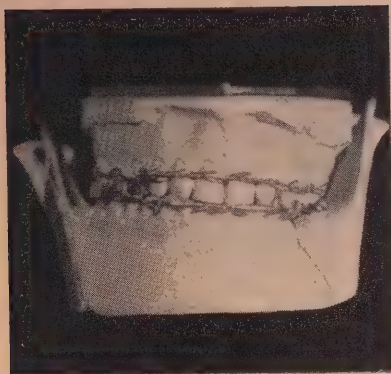


Fig. 8

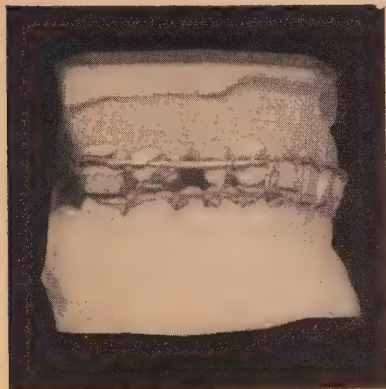


Fig. 9

the posterior part of the anterior fragment containing the coronoid process and part of the ramus was lowered to the proper point, the internal pterygoid muscle was able to pull the outer fragment medially into position.

No infection developed. No anaesthetic was required in treatment and recovery was uneventful. The rubber bite block was removed in three weeks. The wiring was removed and jaw mobilized in eight weeks. On the removal of the wiring, trismus was present but the muscles responded to exercise and the jaw was functioning well in a few days.

The cases reported above were chosen

as they represent types of fractures likely to be encountered in civilian life as a result of blows, falls, automobile accidents, etc. No mention has been made of edentulous cases with or without artificial restorations present as it is felt that this type of case presents sufficient material for a separate article.

In order to have a permanent record of the cases, alginate impressions of the maxillary and mandibular teeth were taken with the exception of Case No. 1 which required urgent and immediate treatment. Casts were poured and the body of the mandible was built on with the addition of modelled rami and condyles if those parts were involved in the fractures. Using the x-rays as a guide, the casts were sawn through and the fragments fixed in position to reproduce as closely as possible the position of the fractured bones.

BIBLIOGRAPHY

1. Barclay, L. F.; Gordon, S. D., and Campbell, H. H.:— Management of Jaw Fractures. *Surg., Gynec. and Obst.* 84:974, May, 1947.
2. Fry, W. K.; Shepherd, P. R.; McLeod, A. C., and Parfitt, G. J.:— The Treatment of Maxillo-Facial Injuries. J. B. Lippincott Company, Philadelphia-Montreal: page 245.
3. Blair, V. P., and Ivy, R. H.:— Essentials of Oral Surgery, Third Edition. The C. V. Mosby Company, St. Louis: page 171.
4. Ivy, R. H., and Curtis, L.:— Fractures of Jaws, Third Edition. Lea & Febiger, Philadelphia: page 57.
5. Waldron, C. W.:— Fractures of the Mandible, with Special Reference to Reduction of Complicated Displacements and Subsequent Immobilization. *Jour. Lancet* 62:228-240, June, 1942.
6. Gingras, R. P.:— Early Management of Facial Injuries. *J.A.D.A. and D. Cos.* 25:693-699, May, 1938.
7. Harper, H. D.:— Use of Cotter Key in Intermaxillary Ligation of Fractures. *D.I. of Int.* 67:430, May, 1945.
8. Bellinger, D. H.:— Fractures and Dislocations of Jaws and Wounds of Face. *Am. J. Surg.* 46:535-541, December, 1939.
9. Doherty, J. L., and Doherty, J. A.:— Fracture of the Jaws. *Am. J. Surg.* 48:576-581, June, 1940.
10. Logsdon, C. M.:— Fracture of Maxilla and Mandible. *J.A.D.A.* 27:389-392, March, 1940.
11. Moorehead, F. B.:— Fractures of Jaws and Their Management. *Am. J. Surg.* 38:474-479, December, 1937.
12. Kazanjian, V. H., and Strock, M. S.:— Early Treatment of Fractures of the Mandible. *J.A.D.A.* 29:76-83, January, 1942.
13. Fry, W. K.:— Barrel Bandage for Fractures of Jaw. *D. Rec.* 60:68-69, February, 1940.

PENICILLIN IN THE TREATMENT OF VINCENT'S INFECTION—A SURVEY*

by B. J. DUPREE, L.D.S.R.C.S., (Eng.) D.D.S., (Toronto), Toronto, Ontario

THE second world war has confirmed the view that Vincent's infection is the most widespread of the contagious diseases which afflict mankind. Owing to its prominence in the late and first World Wars, and due to the fact that Trench Mouth is one of its many names, the impression has gained ground that Vincent's Infection is a disease of modern times. This does not appear to be so, for, as Prinz and Greenbaum point out, the failure of the invasion of Asia in 401 B.C. by the Greek Army, was due to the fact that a great number of the soldiers were plagued with sore, ulcerated and foul-smelling mouths. Similar afflictions were reported among the armies of Napoleon, although the disease does not appear to have been a feature of the Boer War, and it is conceivable that there was less avitaminosis (particularly C) during this conflict.

Although penicillin was discovered by Fleming in 1928, his work received very little attention at that time, and it was not until the outbreak of war that antibacterial remedies became a centre of interest, and research was conducted on an intensive and extensive scale.

As soon as supplies were adequate, the dental profession was quick to seize upon this new drug in its search for a specific remedy for caries and other oral lesions. Signal success has been achieved only in the reduction of the acute phase of Vincent's infection. And here, just as penicillin is no excuse for poor surgery, so neither is it an excuse for the relaxation of the smallest measure which can be directed towards the elimination of the contributory factors of the infection.

So far as is at present known, penicillin is non-toxic to humans, and in fact most authorities prefer to give

massive doses of about 1,000,000 units, if used systemically, even although an apparent cure is obtained with less than half of this amount of drug. The long term effect, if any, remains to be seen.

The unit decided upon was that amount of penicillin which will inhibit the growth of 2,500,000 streptococci in one cubic centimetre of medium.

DIAGNOSIS

Although the aetiology of Vincent's infection is still obscure, and the presence of the fusiform bacillus and Vincent's spirillum can be demonstrated in clinically healthy mouths, the following symptoms have been listed by Lyons,¹ and are generally accepted by the dental profession.

- i. Inflammation of the mucosa, with engorgement of the interdental papillae.
- ii. Ulceration of the papillae, which are ragged and raw, bleed freely, and are covered with a grey pseudo-membrane.
- iii. Inversion of the papillae, with a crater-like appearance.
- iv. Characteristic foetid odour.
- v. Considerable pain in the gingivae, with accompanying recession.

TREATMENT

It cannot be overemphasized that any specific treatment will fail unless accompanied by measures which will eliminate those factors which are contributory to the infection. The following measures must be undertaken:

Complete oral prophylaxis.

The eradication of periodontal pockets and of gum flaps in the third molar region.

The elimination of faulty dentistry and the restoration of decayed teeth.

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The correction of dietary deficiencies.
The establishment of correct occlusal function.

Neglect of this last measure is probably the cause of the majority of recurrent infections.

PENICILLIN THERAPY MAY BE LOCAL OR SYSTEMIC

1. Local treatment may consist of (a) Penicillin paste or packing applied to the interproximal spaces. (b) Topical application. (c) Mouthwash of penicillin. (d) Penicillin lozenges or pastilles.

2. Systemic treatment may be by (a) Oral administration. (b) Intramuscular injection.

1. LOCAL TREATMENT

(A) *Penicillin paste applied to the interproximal spaces.*

This treatment is one of the most effective of the local methods, as penicillin is applied in close contact to the lesions without interruption. The method was employed early in 1945 by Thexton and Dick,² who devised a pack of penicillin in a light magnesium oxide base, which they mixed with pure olive oil, adding cotton wool to produce packs of the requisite size.

100,000 units of penicillin were triturated with 2 gm. of light magnesium oxide, this being sufficient for approximately forty treatments. The paste, which has the consistency of soft butter, is packed around the amelo-gingival margins, and pressed firmly into the interproximal spaces with pledgets of dry cotton wool in order to prevent dislodgement. It is changed daily.

It was found that lesions remote from the packing also resolved, as the penicillin was slowly liberated into the mouth from the pack.

The following results were tabulated:

- I. Patients became asymptomatic in twenty-four hours.
- II. Sloughs separated in thirty-six to forty-eight hours, but in most cases the gingival sloughs separated earlier.
- III. In four to five days the ulcers were epithelialising and in no case

was packing continued beyond five days.

- IV. In four to five days microscopical examination of the slides revealed that the fusospirochaetal symbiosis had disappeared.

It is interesting to note that olive oil was used instead of eugenol, owing to the antiseptic action of the latter. However, in a very careful and detailed research into the use of penicillin in root canal treatment, Potkin³ concludes that the action of penicillin is not inhibited by so mild an antiseptic as eugenol.

The findings of Thexton and Dick have been confirmed by other workers in general. Stewart⁴ employed 200,000 units of penicillin in 2 gm. of light mag. oxide, thereby doubling the penicillin content. Favourable results seem to have been gained more quickly with this concentration, and in any event, no evidence to date has shown that there is a danger of toxicity through overdosage of penicillin. Furthermore, this technique protects the lesions from trauma during mastication, and from the irritating effects of some foods and tobacco.

(B) *Topical Application.*

Here there is a very great concentration of penicillin in contact with the lesions, but only for a comparatively short length of time. Penicillin is applied to the gingivae in solution, by means of a hypodermic syringe, the vehicle being distilled water. A half-inch needle which has been blunted and bent at an angle of 30 to 40 degrees is ideal for the purpose.

Wihr⁵ has treated a series of cases using 6 c.c. of distilled water per treatment, and has varied his concentration of penicillin from 1,000 units to 100,000 units. His results show that there is not much difference in the time required to obtain cures after using concentrations of 1,000, 5,000 or 25,000 units of penicillin per treatment, but that there is a marked shortening of treatment time following the use of 50,000 units in 6 c.c. of distilled water. Cures were obtained in two days, approximately

after using 100,000 units in 6 c.c. per treatment.

From this investigation, it would appear that this is a somewhat wasteful method of treatment, as 200,000 units of penicillin is the average amount needed to effect a cure.

(C) Mouthwash of penicillin.

Hourly mouthwashes of 10 c.c. of normal saline solution containing 10,000 units of penicillin, present an efficient and rapid method of cure.

Stewart⁴ used 200,000 units of penicillin sodium in 240 c.c. normal saline, the solution being kept in the mouth for five minutes, and repeated hourly. It was found that the results were better if the solution was swallowed at the end of the five minutes instead of expectorated, and it was though possible that therapeutic blood levels were established.

(D) The use of penicillin pastilles and lozenges.

Lozenges present the easiest method of applying penicillin to the lesions, and for this reason, this method has been most widely used.

The patient is instructed to place a lozenge containing 500 or 1,000 units of penicillin in the buccal sulcus, and to allow it to dissolve without interference from the tongue or teeth. The time taken to dissolve the lozenge varies considerably with the patient, but most authorities agree that it should not be less than thirty minutes.

MacGregor and Long⁶ carried out an investigation on seventy-five cases, during the latter half of 1944. Their clinical findings were that the patients became asymptomatic and foeter disappeared within twenty-four hours. The signs of acute inflammation and sloughing of the ragged gingival margins were no longer present after forty-eight hours, and within five days the clinical appearance was normal.

Microscopically, it was found that the spirochaetes were absent, and b. fusiformis were much reduced in number after twenty-four hours. In forty-eight hours the fusiform bacilli were further much reduced, and after seventy-two

hours the films showed epithelial tissue with no spirochaetes or fusiform bacilli, and very few organisms of any sort.

No relapses were recorded at fortnightly inspections within five months.

In all cases during this work, the penicillin was incorporated in a gelatin base, and termed a pastille. In this form the penicillin is rather unstable. The manufacturing chemical companies in England subsequently produced lozenges containing 500 units of penicillin in (troch. penicillin B.P.) with a sugar base, and provided they are kept away from heat, they retain their effectiveness for long periods. The possible disadvantages of these trochisi will be discussed later in this paper.

The number of lozenges or pastilles used daily was about fifteen, and there is some disagreement in the literature as to dosage. Webster and Frey⁷ state that six lozenges of 500 units of penicillin each appears to be the optimum, and that the result was not any better when the number of lozenges was increased to ten daily.

Chewing gum containing 20,000 units in each piece is now being marketed, but the results claimed do not appear to exceed those obtained by the use of pastilles or lozenges containing 500 units each. It is felt that while the question of the formation of resistant strains remains in doubt, the use of a smaller, but wholly effective dose is to be preferred.

Henney⁸ states that such penicillin as is swallowed after daily use of lozenges containing 1,000 units each is destroyed by the acid gastric secretions.

It seems possible that this would not necessarily be so following the use of chewing gum containing 20,000 units in each piece.

II. SYSTEMIC TREATMENT

In a very acute and widespread infection by Vincent's organisms, which results in at least a stomatitis and possibly a true Vincent's Angina, systemic penicillin therapy is strongly

indicated. Here marked systemic reactions are present, including an increase in temperature, enlargement of the regional lymph glands, and the appearance of suffering from general malaise.

Latest developments have produced procaine penicillin G in oil with aluminium monostearate suspension, the latter having water-repellent properties, and thus retarding absorption. With this preparation, it is claimed that 90% of patients maintain a theoretically effective blood level of .03 units of penicillin per c.c. of serum at the ninety-sixth hour after injection of one c.c. of the preparation, containing 300,000 units.

(a.) Oral Administration.

This presents the easiest method of systemic administration, but suffers from the great disadvantage of the penicillin being acted upon by the free hydrochloric acid in the stomach. In the case of penicillin, this was first demonstrated by the Oxford workers,⁹ although it had been known to occur previously with certain other drugs.

It has since been demonstrated that despite this destruction by the hydrochloric acid, therapeutic blood levels can be established by the administration of massive doses, when only a proportion of the penicillin is destroyed. Keefer et al.¹⁰ recommend an oral dose three to five times greater than the parenteral dose.

The rate of absorption must exceed the rate of excretion, and Hoffman¹¹ suggests an oral loading dose of 200,000 units, followed by 100,000 units every three hours. Where sodium citrate or aluminum hydroxide is contained in the capsule with the penicillin, these antacids counterbalance, to an extent, the hydrochloric acid, and allow the use of smaller doses of penicillin.

(b.) Intra-muscular injection.

This was the earliest method of treatment with systemic penicillin, and it remains the method of choice where the patient is in hospital, as would be likely if the Vincent's infection were sufficiently severe to merit systemic

treatment. However, where a patient is at home, the inconvenience of a three or four hourly injection, particularly during the night, is plain.

Apart from this disadvantage, therapeutic blood levels are established more rapidly than is the case with oral administration, and the total dosage required is smaller, probably by one half.

The penicillin is made up in a solution of 20,000 or 30,000 units per c.c. normal saline, and although the dosage varies according to different authorities, it is suggested that 40,000 or 60,000 units are injected four hourly for a three or four day course. The severity and course of the disease is the determining factor, but a total dosage of 800,000 to 1,000,000 units is thought desirable even if an apparent cure is obtained after a smaller dose.

An injection of 300,000 units in 4.8% beeswax in peanut oil has also proved successful. The injection need only be made once daily, as there is a gradual release of the penicillin and therapeutic blood-levels are maintained for twenty-four hours. The disadvantage of this method is that it is frequently attended by considerable pain at the site of injection.

CONTRA-INDICATIONS AND COMPLICATIONS

In general the use of penicillin is contra-indicated in infections by gram-negative bacilli, as they are resistant to the drug, and in fact, may produce the enzyme, penicillinase, which is capable of destroying penicillin.

Penicillin is effective against gram-positive bacilli, gram-negative and positive cocci and also spirochaetes. As far as is known at present, there are no undesirable sequelae attendant upon its use, as for example, the kidney lesions which may occur with the use of sulphonamides, and as it appears to be non-toxic to the tissues, there is no danger of an overdose.

The use of strong antiseptics, and drugs which are oxidising agents is contra-indicated in the presence of penicillin, although it may be used with procaine.

The possible complications are (i) a stomatitis, which has been noted following treatment with penicillin lozenges, (ii) the formation of resistant strains, and (iii) a local skin reaction at the site of intra muscular injection following systemic administration.

I. Stomatitis.—The clinical picture was stated by Ellinger and Shattock¹² to be that of a nicotinamide deficiency, associated with a diminution of the nicotinamide methochloride output. These authorities suggested that the penicillin swallowed by the patient inhibited the quantity of the vitamin usually obtainable from this source.

The majority of opinions, however, considered that the stomatitis arose from a direct cause in the mouth. One school pointed out that as a sucrose base was used in many other tablets dissolved in the mouth, the penicillin must be responsible. On the other hand, no cases of stomatitis appeared to have been reported following the use of penicillin pastilles, which have a gelatin base, and it was considered therefore that the sucrose base of the commercial lozenges (e.g. troch. penicillin B.P.) was responsible. In a series of over one thousand cases treated with penicillin pastilles, MacGregor and Long⁶ reported that no stomatitis was found to occur.

Long¹³ states that he believes the condition to be due to the use of penicillin in combination with sugar base, and points out, that if sufficient penicillin is given systemically, it is secreted in the saliva, producing the same changes in the oral flora as are obtained by local treatment, but that no stomatitis then occurs. If such patients are given boiled sweets to suck, they then develop the condition.

II. The possible formation of strains resistant to the penicillin. Bacteria normally sensitive to penicillin have been shown in vitro, to become resistant if grown in concentrations of the drug too weak to kill them. Whether this is also the case in vivo is not yet certain. The danger appears to be not so much the formation of a resistant

strain, as the persistence of such individual bacteria as are not destroyed by the low concentration of penicillin, and the propagation of their type.

During the local use of penicillin in the mouth, it seems that a change of the microbial flora, rather than the resistance of some of the strains is a possible cause of complication, while a similar interference with the balance of the indigenous bacteria of the intestine, may possibly lead to an upset of the production of certain vitamin B fractions which are synthesized there.

It is of interest to note that in a series of experiments, Kolmar and Rule¹⁴ conclude that treponema pallidum does not show evidence of an acquired resistance after three consecutive passages through the testicles of rabbits treated with subcurative amounts of commercial penicillin, which is in accordance with the previous findings of Tung and Fraser¹⁵.

Finally, although it is not yet known what the clinical significance, if any, is, morphological changes of the fusiform bacilli were observed by Frey¹⁶ in 62 of the 224 cases of ulcerative gingivitis under treatment with penicillin in solution, lozenges, and both. These changes appeared after twenty-four hours' treatment, but were no longer demonstrable after a further twenty-four hours' treatment. Frey concluded that these enlargements are caused by penicillin, and represent cytoplasmic damage.

III. In rare cases an area of urticaria develops around the site of intramuscular injection. Raised weals are seen, and there is intense itchiness, the lesion usually appearing a few days after the injections were commenced. The reaction is self-limiting, and only likely to last about four or five days. The use of antihistamine drugs (e.g. Benadril, 20 milligrammes t.d.s.) may be beneficial in relieving the discomfort of the itchiness. In a rare case where this type of reaction is marked, penicillin therapy may be continued orally.

According to Pillsbury et al,¹⁷ peni-

cillin reactions are more frequently encountered in patients who have had repeated courses of the drug.

A COMPARISON OF THE EFFECTIVENESS OF THE SULPHONAMIDES AND PENICILLIN

Prior to penicillin being available for the general use of practitioners in treating Vincent's Infection, the sulphonamides were tried for this purpose.

Sulphathiazole gum was used mainly, and the dissolved sulphathiazole content of the saliva reaches a level which should be effective against sulphonamide susceptible organisms.

In the case of Vincent's Infection, however, it is not certain that there will be an effective level in the deeply eroding interproximal crevice. In addition there is extensive necrotic tissue and debris which are likely to contain P-amino-benzoic acid, which is known to inhibit the action of the sulphonamide drugs.

In a series of 48 cases of acute Vincent's stomatitis treated with sulphathiazole gum, 47 patients were considered clinically cured in a treatment time ranging from 3-14 days, and averaging 5.3 days. No control series was run.

The Council on Dental Therapeutics of the American Dental Association issued a report on March 8, 1947, which concludes with the following remarks. "If this preparation were an essential agent for the treatment of dental infections, the risk of sulphonamide reactions might be justified. However the evidence is not yet at hand to prove that sulphathiazole gum is superior to other forms of treatment which do not have the potential hazard of serious sensitization reactions, and consequently the Council has found this product unacceptable for Accepted Dental Remedies."

CONCLUSIONS

I. In penicillin, we have available a drug which is a specific for the reduction of the acute phases of Vincent's Infection.

II. In the large majority of cases, the local applications of the drug is adequate and this may be by means of penicillin mouthwashes, packs, topical application or lozenges. There is little difference in the time needed to reduce the infection by these different methods, but the lozenges present the most convenient method, both for the patient and general practitioner.

III. In those few cases which are so severe that there is a general involvement and accompanying enlargement of the regional lymph glands and raised temperature, massive systemic doses are indicated. These may be a. The intramuscular injection of aqueous solution of penicillin, which must be given three hourly through the treatment. b. The injection of 300,000 units in beeswax and peanut oil once daily. c. By the oral administration of capsules containing four or five times the intramuscular dose. The advantage of this last method is that it is self-administered, but it has the twin disadvantages of the patient possibly omitting to take a dose, especially during the night hours, and also the uncertainty of how much of the swallowed drug is available for therapeutic use. It seems that both these factors must vary with different patients, while there is no variable with the intra-muscular method, which, in addition, is more economical.

IV. Two local complications may occur; stomatitis following the use of lozenges, and urticaria around the site of intra-muscular injection. One general complication has far reaching and serious possibilities. This is the possible formation of resistant strains. The present feeling is that these are not likely to occur following the local use of penicillin under the direction of a practitioner, but with the recent example of the abuse of the sulphonamide drugs which occurred during the war years, it seems imperative that a more circumspect course should be followed with penicillin.

V. The reduction of the infection can be attained with the use of sulpha-

thiazole gum, but the time of treatment is longer than with penicillin, and there is a definite possibility of the formation of strains of bacteria which may be resistant to sulphonamide treatment subsequently.

VI. Finally, and this has been left until last for emphasis, any drug therapy for Vincent's Infection must be accompanied by general measures which will eliminate those factors which are contributory to the infection.

BIBLIOGRAPHY

1. Lyons, D. C.—Monograph on Bacteriology and Control of Vincent's Infection, and Associated Diseases. Dental Items of Interest 65; 211, March, 1943.
2. Thexton, R. and Dick, P. K.—Penicillin Packs in the Treatment of Vincent's Infection. Brit. D. J. 78:292, May 18, 1945.
3. Potkin, M. N.—The Use of Penicillin in the Treatment of the Root Canal, J.A.D.A.; 34:461; April 1, 1947.
4. Stewart, G. G.—Comparative Methods of Using Penicillin in the Treatment of Vincent's Infection and Other Oral Lesions, J.A.D.A. 33; 725, June 1, 1946.
5. Wihr, N. L.—Penicillin in the Treatment of Vincent's Infection. J.A.D.A., 34; 464, April 1, 1947.
6. MacGregor, A. B. and Long, D. A.—Penicillin Pastilles in the Treatment of Acute Ulcerative Gingivo-Stomatitis. Brit. D. J. 78; 33, Jan. 19, 1945.
7. Webster, J. Forbes and Frey, Hilde—Clinical and Microscopical Observations in the Treatment of Vincent's Infection With Penicillin, Brit. D. J. 82; 70, Feb. 7, 1947.
8. Henney, F. H.—Paper read at the 83rd Meeting Chicago Dental Society, February 11, 1948.
9. Abraham, E. P. et al.—Further Observations on Penicillin. Lancet 2, 177, August 16, 1945.
10. Keefer, C. S. et al.—New Dosage Forms of Penicillin. J. A. M. A. 128, 1161 August 18, 1945.
11. Hoffman, W. S.—Penicillin: Its Use and Possible Abuse. J.A.D.A. 34, 89, January 15, 1947.
12. Ellinger, P. and Shattock, F. M.—Nicotinamide Deficiency after Oral Administration of Penicillin, B.M.J. 447, October 26, 1946.
13. Long, D. A.—A letter to the Editor B.M.J., page 389, March 22, 1947.
14. Kolmer, J. A., and Rule, Anna M.—Proc. Soc. Exper. Biol. and Med. 63; 240 (Nov.) 1946.
15. Tung, Tsun and Fraser, C. N.—Am. Jour. Syph. Gonorr. and Ven. Dis. 30;205 (May) 1946.
16. Frey, Hilde—Characteristic Morphological Changes in Bacillus Fusiformis in the Course of Penicillin Treatment, B.D.J., 82,135, April 3, 1947.
17. Pillsbury, D. M., Steiger, H. P., and Gibson, T. E.—The Management of Urticaria due to Penicillin, J.A.M.A., 133, 1255, April 26, 1947.

ANNOUNCEMENT

Notice Concerning Horace Wells Memorial Volume

The Horace Wells Memorial Volume—450 pages—will be ready for sale and distribution early in November, 1948.

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Problems in Practice

Our readers are invited to send in their problems in practice to the editorial office, 314 Somerset, Building, Winnipeg. These questions will be submitted to prominent dental authorities and their replies sent to the one asking the question. The more interesting subjects will be published in this section of the Journal over the author's name unless otherwise requested.

Problem from Manitoba

Case of root resorption presented by Dr. B. L. Kushnerov of Winnipeg. The first picture was taken in 1931 and the second in 1948. Should this tooth be retained?

The process of resorption often becomes arrested in such cases and the destroyed tooth structure may be replaced by osteodentine. When this occurs, the teeth may be retained indefinitely. Another roentgenogram made



1931



1948

Reply from Mayo Clinic, Rochester, Minnesota:

"I have looked at the dental roentgenograms which you sent me and I am returning them to you. From the roentgenographic appearance this is no doubt a case of idiopathic resorption.

in about a year should reveal whether there is active resorption. If there is no evidence of further resorption prognosis for retention of the tooth is favourable."—*Edward C. Stafne of the Section on Dental Surgery, Mayo Clinic.*

ANNOUNCEMENT

Chicago Dental Society to Hold Meeting in February

The Eighty-fourth Midwinter Meeting of the Chicago Dental Society will be held February 7-10, 1949, at the Stevens Hotel, Chicago.

A full program of essays, limited attendance clinics, table clinics and motion pictures will be presented. The entire program will offer an unexcelled opportunity for postgraduate study as subjects of popular interest to all dentists—both general practitioners and specialists will be discussed by recognized authorities in each of the dental specialties.

The Forum

AUXILIARY PERSONNEL—HOW FAR SHOULD WE GO?

by Dr. M. DON CLAWSON, Dean of Meharry Medical College, Nashville, Tennessee.

Condensed from New Eng. D. Jour., July, 1948

With me, the training of medical students, nursing students, and auxiliary personnel which we have at Meharry is not a philosophy—it is a “modus operandi.” We have an established fact and we see results.

With the medical school, we have the great number of auxiliary personnel that physicians feel they need; in dentistry, we have never had the advantage of these auxiliary workers, and we have learned to, after a manner, work alone to our own detriment. We have worked very hard, and we have aged very quickly.

I agree with one of the speakers that, possibly, we should not develop three times as many dentists as we have now; I don't think that is the answer to the problem because the practice of dentistry in this country is somewhat dependent on economics, and economics, as yet, are not controlled—you have ups and downs—which would find our profession in a very embarrassing position if we had tripled its number and had to go through another period such as you men went through.

First of all, I think the problem of child dentistry is the most acute problem facing us, for several reasons. The birth rate is increasing tremendously; many of our dentists are getting older and are more likely to work on older patients who are offering a more lucrative field in prosthetics, and more and more children are being neglected. If we can find a way to train auxiliary personnel to take care

of the great need in this field, I think we are possibly approaching the subject from the right angle.

I think that where we have erred is not putting ourselves in the place of the auxiliary personnel and finding a way to make them happy.

I operate a nursing school, and I find my nurses very unhappy. Everything is not rosy over on the medical side of the picture. I would like to have all think of this as a health field, and not dentistry, medicine, and nursing, because it's for the well-being of humanity; it is for the patient who isn't normal, who is ill, that we are all working and striving, so I don't think we should separate it into just little groups who have different methods of training and different methods of practice, because, while we do deal with particular fields, we do have the same responsibility—the over-all care of the patient.

I have integrated into medicine not only nursing that you get in the hospital and all the auxiliary programs, but dentistry. I have a process there of teaching which is unique in the country, in which the physician, as such, loses his identity; the dentist loses his identity; nurses and everyone else that work there lose their identity, and we take care of the child from premature birth through the twelfth year. It is a very versatile program, financed by the Children's Bureau, and I am interested in the teaching by problems they get. As we come down this production line of caring for these

children, the student helps at his level; and when it comes time for the graduate student to do his work, he does it under the supervision of the professor in his department—dentistry, nursing, medicine—but the student does the actual treatment. I have them in three groups—three medicine, three dentists, and one nursing, because that is just about the percentage in my three schools—and when he comes to his part, he steps in and does the work. The medical colleague, the nursing colleague, both students like himself, have the opportunity, under expert supervision and direction, to know how that child is taken care of throughout the health field.

They lose their identity as a medical student and a nursing student, and believe you me, they like it. They feel that they know this thing, and it has worked very well. The students like it, and the faculty likes it, and I believe we are making a little progress in the integration of the whole health field.

We are woefully behind in the use of auxiliary personnel. I believe that the reason that we don't have happy auxiliary workers is that we have closed the door some place along the line to their ever becoming counterparts of ourselves. Remember that—he doesn't want to work for you if he is always going to be a menial. A technologist doesn't want to sit in your office and make your money for you unless sometime he can be a counterpart of yourself.

So, we at Meharry have arranged so that there is never a bar to auxiliary personnel. We have three phases which I might explain to you very quickly.

The first is the dental assistant. The dental assistant is required to have two years of college. They come to us and are given one year of training, which is a part of the two-year dental hygiene course. The first year is so arranged that those things we feel are necessary are presented to her and she masters them. She may proceed directly to the second year of dental

hygiene, or she may be allowed to go out into practice. The economic factor with our students is important. They don't have enough money, usually, to go through the complete course without making a break and dropping out and working to make enough money to continue. I think it would be so much better to let them work in the field for which they are training to make enough money to continue, so I let them drop out for one year or two years, but not over three years. As a dental assistant, the student saves enough money to come back and take her second year of dental hygiene without financial embarrassment. They do a good job.

Another thing is that we have arranged our courses and strengthened them so that they are acceptable as a year of liberal arts training—with this exception: that she has to take only one summer course in liberal arts college after she gets her B.S. degree. Then she goes out and she can be a hygienist for as long as she wants to, but the gate is never closed to dentistry—she can become a counterpart of you. She can go ahead and make some money as a dental hygienist and put her application in for dentistry, if she has a B.S. degree, which we require for dentistry, and if she competes favourably with the top thirty-six in the freshman class, she can go on. They must do top third work—be in the top third of the class.

The door has never been barred to those girls to prevent them from coming up from dental assistants to a counterpart of yourself.

And that is what is the matter with the nurse. She is a very unhappy person, and so is your hygienist. They seem to be pleased, but get out and talk to them and you will find that they are a very unhappy set of girls because they are too big to be called little and too little to be called big.

The dental assistant is happier because she knows she isn't going any place, but if you go to a convention of

hygienists, you will find that they are unhappy, because they don't know where they are going.

In dental technology it is exactly the same thing. This boy, with one summer's work after he finishes his technology course, can get his B.S. degree, and don't you think he is much happier when he knows the door isn't closed and he's going to be like you, instead of always sitting back in the

laboratory and never going any farther?

The real way to do dentistry, no doubt, is to have a well-trained technician in your office with you, where he has your respect and you have his respect, and he sees the patient once in a while—he knows he is a human being.

That's the reason I like to train them in the dental schools.

DENMARK'S DENTAL HYGIENIST

Reprinted from Jour. of the Am. D. Hy. Assoc., July, 1948.

The following article was taken from a personal letter written to Columbia's Mrs. Frances A. Stoll by Bodil Torbell, a student of the class of 1942 who has since returned to her home in Denmark. Mrs. Torbell is a remarkable person on several counts. She was a licensed dentist in Denmark and accompanied her husband to the United States with the idea of practicing her profession here. Finding that there was no reciprocity she decided to become a dental hygienist. The language barrier was surmounted by the hardest kind of application and Bodil graduated with the top honors of her class and the Swanson Medal. Her quiet nordic charm won many friends among classmates and colleagues.—Editor of Journ. of Am. D. Hy. Assoc.

Now for my work in which I am very happy. The ideal and goal here in Denmark is to take care of teeth of every child from the age of three to the age of eighteen, free of charge. In almost every city you have a dental clinic for school children. These are taken care of from the time they enter the first grade up to and including the age of fifteen. Before they enter school there is no care, no public care, that is, of their teeth. In Copenhagen though they are about ready to start the clinics for the pre-school children. So far we only take pupils from public schools, but it is our intention to take all children including those from private schools. All the citizens contribute to the fund (in taxes) which keeps the clinics going, but at present we haven't enough dentists nor material to enlarge or build additional clinics.

It is voluntary for the parents to send their children, but once refused the child will never be permitted to enlist for this free service. In this particular clinic we take care of about three thousand children from four public schools. Our attendance is 98.8 per cent of which we are pretty proud. It means that our office has a good

reputation. We have the children of poor and rich alike; even one of my colleagues who has his own private office in the city sends his children to our clinic.

We figure approximately a thousand children for one dentist so this office should have three and it has now—though I was alone until May 1947. From May 1st, 1947 until January 1st, 1948 I had one assistant. Then I was lucky enough to get one more. I say lucky because most offices, both private and public are short of doctors. We see or should see the children twice a year. Their cards are sent to the schools, to the teacher who is in charge of the particular class we wish to see, and he sends the children in time to reach the office. The hour is written on the card.

I say we "should" see them twice a year, but the children we have at present have not been here for more than a year, so much are we behind with the work. However, the first and second grades and all the following I hope to be able to carry through on the regular six months schedule.

We have started using fluoride applications on the first grades this year and intend to continue with those

children up through the grades. Whether we will use it on next year's classes depends on what we hear about research and technique from the United States in the meanwhile.

We do all kinds of fillings, mostly amalgams and synthetic but occasionally crowns and inlays. We do prophylaxis (and how I wish I had some of my colleagues from the States!) I also miss the wonderful instruments you have over there for gum treatments, extractions, root canal work, etc. Orthodontics, however, we don't do. For that the children are referred to private dentists. So it is all over except in Copenhagen where there are enough such cases to keep one or two specialists busy.

We do in a sense do some orthodontics though and that is by prevention. We get the children early enough to stop bad habits which in some cases as we all know are the causes of irregularities of the teeth. Very often we have children with the upper centrals or laterals in oval occlusion. Simple things like that we correct very easily but there is no time for the larger undertakings and also I lack the experience to do it.

There are quite a few post graduate courses, often weekends, in one city or another. I join up as far as I have occasion to do it. Mine is a city job and we have all the vacations the schools

have. In the fall vacation (one week in October) I went to a post graduate course in Copenhagen and again in January. Along with being very instructive this last course was real fun for me because my class of 1934 was represented by a larger number than any other class. We gathered evenings in the homes of some of those living in the vicinity of Copenhagen and talked over college days and all that had gone by since that time. I had to tell about the U.S. and they all envied me for having visited your great country.

Last summer I took care of the practice of my first employer for three weeks (we have six weeks summer vacation and I thought I could spare three). I did some work for adults and would like to do the same next year. Here in Denmark the young dentists are not permitted to have a practice of their own before they have worked two full years under experienced dentists.

This is somewhat of my schedule: we start in the office at 8 A.M. and work until 2:30 P.M. I leave home at 7:00 on the train and I am back before 3 o'clock. On Saturdays we stop at noon so it is a 36 hour week. I hope some day to get a scholarship and leave of absence. Then I will cross the ocean again to Columbia University and take a post graduate course in juvenile dentistry.

FIELD STUDIES ON DENTAL CARIES IN NEW ZEALAND Interim Report

by R. E. T. HEWAT, D.D.S., (N. Z.)

(Dental Field Research Officer, Medical Research Council of N. Z.)

Summary of paper in New Zealand Dental Journal, July 1948

1. A short discussion on procedure in field studies is presented.

2. Methods of investigation are explained, including a caries index system based on the total number of tooth surfaces present, and a method for the exact comparison of caries susceptibility between small groups of varying ages.

3. A marked yearly increase in sus-

ceptibility to caries in N.Z. children is found from the twelfth to the sixteenth year. This is more pronounced in girls than in boys.

4. Over the age period 13-16 years, there is found a gradual increase in susceptibility to caries of the occlusal and the buccal-lingual tooth surfaces, and sharp increase in susceptibility of the proximal tooth surfaces. At the age

of sixteen, the proportion of proximal surfaces affected becomes higher than the proportion of occlusal.

5. The comparative immunity of Polish children in N.Z. and of orphanage children is confirmed. The orphanage children are approximately twice as susceptible as the Poles, and children living in private homes approximately twice as susceptible as orphanage children.

6. The relative immunity of Polish and orphanage children is found to be pronounced in respect to the proximal and buccal-lingual tooth surfaces.

7. Significant variations in the incidence of caries are found amongst 16 different orphanage groups. Those which show a negative susceptibility in permanent teeth present a similar condition in the temporary teeth.

8. The evidence available from this work and from dental literature shows that the teeth of N.Z. children are approximately 3 times as susceptible, age for age, as children's teeth in the U.S.A. and in the United Kingdom.

9. The caries index adapted for use in these studies is given a practical test alongside two other systems in general use overseas, and its efficiency is thereby confirmed.

10. With regard to dental status, or the estimate of dental need and dental care as found in the 13-16 year old children, the proportion of teeth extracted on account of caries, an aver-

age of .79 teeth per child, is not high considering the high incidence of caries. The average of 9.55 teeth with one or more carious defects shows the amount of untreated caries; and the increase in the number of teeth made sound by fillings, 5.9 to 8.0, is evidence not only of the very considerable amount of conservative work done during the age period under review, but also of the number of fillings done in permanent teeth prior to the age of 13 years.

11. A comparison of the dental status of certain N.Z. children with children of the same age in the U.S.A. shows that the dental service available to young children in this country has been effective up to the age of 15 years in keeping the number of teeth extracted below the level for extractions in the U.S.A. The amount of filling work done per child is greater in N.Z., but inadequate to meet the need that exists. Each child in N.Z. has, at the age of 16 years, 9.7 carious teeth, compared with 3.0 in the U.S.A. On account of the high incidence of caries in N.Z., we require four times the number of dentists needed, for a comparable number of children, in the U.S.A.

12. No correlation is found between the incidence of caries and the quantity of milk or tea drunk daily.

Only a slight indication is found of correlation between a low incidence of caries and a high standard of oral hygiene.

Suppositions about prevention of coronary disease are hardly more than opinions, coloured by the personal experience or bias of the observer. With this apology I will state my own conjecture. Individuals of long-lived ancestry who remain thin and physically active, whose metabolism is on the plus rather than the minus side of the normal range, who avoid prolonged periods of fatigue, and who are not malignantly ambitious seem to live long.

Hufeland, the able scientific friend of Goethe and Schiller is reported to have said that "there is no instance of longevity in a professed idler. The truth is that he who is occupied on subjects requiring thought, has not leisure to be intemperate"; and as Brunand said "literary men have, in all climates and times, usually been long lived."
—Howard B. Sprague, M.D. of Boston, in Transactions of the College of Phy. of Phila.

PERIODONTAL THERAPY

by HENRY M. GOLDMAN D.M.D., Boston, Mass.

Condensed from F. Review of Chi. D. Soc., Aug. 1, 1948

The treatment of periodontal diseases consists of three phases: one, the correction of aetiologic factors; two, the correction of symptoms; and, three, the institution of procedures for the maintenance of health.

The correction of aetiologic factors consists of the removal of local causes and the correction of influencing systemic conditions. There are numerous local causes of periodontal disturbances; the most important are calculus, mechanical irritants, loss of individual tooth anatomy with resultant lack of marginal ridges and spillways, loss of contact points, and missing teeth allowing for drifting of teeth and occlusal changes. Systemic influences are very important and must be controlled if treatment is to be successful.

The removal of calculus is accomplished by scaling and polishing the teeth thoroughly. The best procedure is to scale and polish each tooth thoroughly in succession in a systematic fashion. One should begin the instrumentation as well as the polishing at a definite point and continue in such a manner that no surface of any tooth will be overlooked. It matters little as to what system is adopted, so long as it is regularly applied. In scaling one must remove all deposits, stains, and secretions from the exposed surfaces of the teeth and the areas beneath the free gingivae. The operator should develop a firm yet gentle touch; and the gentle handling of the lips, cheeks, and the tongue should be carefully observed.

The choice of instruments is a matter of taste and experience. As an operator gains skill he usually learns to employ a fewer number of instruments more effectively. Instruments should be of simple design and capable of being easily sharpened; the more uses to which an instrument can be put, the greater is its value in prophylactic

work. In the removal of calculus from the necks of the teeth, the push-and-pull stroke is the best. This consists of moving an instrument along the tooth surface in a continuous to-and-fro movement which will crush or crack any calculus present. In scaling off pieces of hard deposit, a pulling motion will be found most effective. The instrument is carefully carried to a point beyond the deposit, then with a proper rest, it is firmly drawn toward the occlusal surface. When the deposits are small and fairly soft, a short pushing stroke may be found effective.

Polishing should be carefully executed. The use of disclosing solution is helpful and should be routinely used. The teeth should be polished with fine pumice mixed with kaolin in water with a drop of tincture of green soap added; this makes an excellent polishing agent but it should be applied rather wet when it is used in a rubber cup run by the engine. It should be of firmer consistency when used with the porte-polisher. The proximal surfaces should be polished with ribbon silk floss to which the polishing agent is added.

The elimination of mechanical irritants is extremely important. Faulty contact points with resultant food impaction, faulty marginal ridges with improper spillways, overhanging fillings, faulty crowns, and other such irritants must be corrected. All these conditions, which have presumably been recorded in the examination chart as aetiologic factors, must be corrected. The rehabilitation of a deficient, malfunctional masticatory apparatus is essential; this procedure consists of restoring functional occlusion to the teeth as individuals and as members of the jaws. It is essential that not only the centric position but also the other excursions of the mandible be corrected so that no tooth is over-

burdened. In an occlusion with no teeth missing, but where there is occlusal trauma present, grinding of the teeth for equilibration may be done. Reconstruction of a deficient occlusion may have to be accomplished by grinding for equilibration, and by insertion of fixed partial restorations, or removable dentures, whichever may be necessary.

The correction of symptoms consists of: one, the elimination of pockets with resultant correction of gingival supuration; and two, stabilization of the teeth. After the teeth have been scaled and polished, many shallow pockets will disappear due to the resolution of inflammation and resultant shrinkage. However, many will remain and thus it is necessary to resort to other meth-

ods to eradicate these pockets; these procedures include subgingival curettage, flap operation, gingivectomy, and electrosurgery.

The institution of procedures for the maintenance of health play an important part in the treatment of periodontal diseases; in many cases it is here that the difference between success and failure lies. It is imperative to impress the patient with the value of good oral hygiene. The patient should be taught correct tooth-brushing, gingival massage, and in many cases the correct use of floss for interdental cleaning, and the use of interdental stimulators. Home care not only helps to produce a healthy state of the oral cavity, but it is the chief agent in the maintenance of health.

DANGER OF BIOPSY

by REED O. DINGMAN, D.D.S., M.D., Ann Arbor, Mich.

Excerpt from J. Oral Surg., July, 1948

It has been felt by some observers that the manipulation of trauma incidental to the removal of a section of tissue for biopsy might result in early metastasis of the tumour cells. But in the oral cavity the taking of a biopsy, if done with gentleness and care, need not be a matter of great concern as far as dissemination of the malignant tissue is concerned. It is probably much more dangerous to manipulate and palpate the tumour unnecessarily during the course of the examination.

It has been shown by some observers that the removal of tissue for biopsy does not increase the incidence of metastasis. Certainly the minimal dangers incident to the removal of a biopsy section are far outweighed by the dangers of attempting any type of treatment without a definite diagnosis. Under no circumstance should treatment of neoplasm be attempted without a positive diagnosis by microscopic means whether the lesion is far advanced or in early stages of its development.

The lapse of time after the removal

of the section for microscopic study and before surgery is instituted varies to some degree. In general it is much better to institute treatment within the earliest reasonable length of time following the excision of tissue for biopsy.

All abnormal tissue removed from the region of the oral cavity should be submitted for examination. Quite often epuli, hypertrophic soft tissue, material from bone defects and so forth are found to contain highly significant pathology. For the benefit of the patient and for the protection of the surgeon, this information should be available. It should be a rule in every office and clinic that a section of all abnormal tissues be submitted for study.

Generally the permission to take a biopsy specimen is not difficult to obtain when the patient understands there is a possibility that some serious condition might exist. Most patients are intelligent enough to want to know the cause of the difficulty and will give permission readily for biopsy. This is particularly true if there is some question about the presence of malignancy.



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Editorial

DENTAL SERVICE FOR ALL

In "Medicine and Society" Dr. Bernhard Stern has this to say about medical service for all the people:—"The medical profession is beginning to face realistically the crucial fact that medical services have not kept pace with medical knowledge. Of this the public is keenly aware, and resentfully so. People are not concerned with advances in the abstract but only as they impinge upon them personally. Advances in therapy are of little significance if they are outside the range of their experience because they belong to the low income groups or live in rural areas or are Negroes. It is to the self-interest of the profession that this situation be remedied, for when medical care is unavailable, patients and their relatives are likely, consciously or unconsciously, to hold the physicians accountable.

"The primary social responsibility of the medical profession therefore is to provide a high quality of curative and preventive medical service to all the people, whether they belong to low or high income groups, whether they be rural or urban residents, whether they be Negro or white."

Are these statements not applicable to the practice of dentistry? Have we adopted systems and techniques which tend to markedly limit our output thus restricting our services to a fraction of our population? Does the periodontist adopt a conservative technique which involves many hours of time and therefore of necessity must demand a substantial fee, when a simpler but more radical procedure would secure even better results in a

fraction of the time with a correspondingly lower fee? Does the general practitioner know the shortest way to prepare a cavity and what instruments to use to obtain that objective? Does the prosthodontist know how to make his diagnosis and set up his case in the shortest possible time, doing nothing himself outside of the patient's mouth that a capable technician could do just as well or better? Do most dentists employ at least one assistant and preferably at least two in order that much more work can be accomplished in a given period with less strain on the patient and operator and thus cutting down overhead? Have we been terribly negligent in allowing the years to slip by and still have made no provision to train dental hygienists in order that an additional load may be taken off our shoulders? When we do start to train them some time in the future are we going to adopt a plan whereby a mere handful can be turned out at one time and the demand for this service not be made available for some years to come when one of our greatest needs at the present time is for a marked increase in the utilization of auxiliary personnel?

The people of Canada have been and are being educated to the importance of a healthy mouth even though there is a long way to go yet. The man and his wife of modest circumstances with several children do not want to see their children suffer or suffer themselves for want of adequate dental care. I am impressed with the words of Kenneth Easlick in the *Illinois Dental Journal*: "We must recall that probably one of the hardest laws of nature still operates—there is no surer road to extermination of the human organism than failure to adapt to a changing environment. It is doubtful if dentistry can long maintain its position as an independent health profession in a security-minded nation and supply its services only to 10 to 30 per cent of the people. If 140 million people seriously demand a broader distribution of good oral health care in this country, 70,000 dentists can only offer futile resistance to the social changes which appear certain during the next few decades. But 70,000 scientific thoroughly informed cooperative dentists can do much to direct productively the changes which may affect the practice of the profession."

Easlick refers to scientific thoroughly informed cooperative dentists. Are we scientific and well informed in our outlook? A while ago I was speaking to two well known dentists in one of our western cities neither of whom employed an assistant. When asked why the reply was "I don't want to work that hard." Surely I do not need to comment on such a state of affairs beyond to say that such a viewpoint is born in ignorance and grows up in indifference.

Indeed we should approach this problem with all the scientific data available. We should have more and more study clubs not so much to find out how to insert a perfect filling regardless of time consumed but how to insert such a filling in the smallest number of minutes. It is obvious that some men take two or three times as long as other men to insert an equally good filling and this applies to every procedure in the practice

of dentistry. We need to approach the problem from the scientific standpoint.

E. V. Condon, Director of the National Bureau of Standards, Washington, has this to say:—"Science is the process of studying and the results of study of the facts of experience derived from a conscious program of observing, while systematically varying the factors of a given situation in order to arrive at a rational understanding of the observational data so obtained; that there is still a great reluctance to accept and extend its arc, that science can grow and develop only by a wider distribution of information about its results in order to bring new young minds to bear on its problems." Perhaps this problem "Dental Service for All" is one for our young men to solve; if so may God speed them in their endeavours and we can all help by making known as widely as possible our findings in the practice of the many branches of our profession.

M. H. G.

BOOK REVIEW

Principles of Full Denture Prosthesis,

by Wilfred Fish, C.B.E., M.D., D.Sc., F.D.S.R.S.C., Eng. Late Honorary Dental Surgeon and Lecturer in Dental Prosthesis, Royal Dental Hospital and School of Dental Surgery, London; Late Examiner in Dental Prosthetics, University of London and University of Manchester; Honorary Dental Surgeon, St. Mary's Hospital, Paddington. Fourth Edition—revised. 140 Pages. Published by Staples Press Limited, London, England. Price, 15/- net.

Those of us who spend any large part of our time in the study toward improvement in dental prosthetics welcome this fourth edition

of this interesting work. As in earlier editions Dr. Fish has given careful explanation of the principles on which successful prosthetic practice depends. In addition he applies these principles in arriving at a clinical solution of the problems involved. Dr. Fish still stresses the importance of the "polished surface" of the denture in order to harness the various muscles and make them assist in stabilizing the denture. A new chapter discusses the position of artificial teeth in relation to the face and jaws—both in cases of recent extraction and in cases where the landmarks are lost.

This book is a definite contribution to the serious student.

KENNETH M. JOHNSON

CANADIAN DENTAL ASSOCIATION NEWS

(From the Office of the Secretary)

Increase in Per Capita Grants

Notification has been received that both Nova Scotia and New Brunswick increased their per capita grants to the C.D.A. from \$8.00 to \$10.00 at their respective annual meetings held recently. These actions are effective beginning for the year 1949.

Four provinces, namely Alberta, Ontario, Nova Scotia and New Brunswick have now adopted this rate. The remaining provinces are contributing at the rate of \$8.00 per capita.

Ontario Public Health Training Grant

As a result of the Federal grant for training public health personnel, the Ontario Government has announced that for those desiring to take the Public Health Course, \$250.00 per month for married men and \$200.00 per month for single men will be granted. It is stated that indication of future employment in public health service is a requisite for the applicant. This assistance is confined to Ontario applicants but it is probable that other provincial governments will make similar proposals.

NEWS FROM THE PROVINCES

NOVA SCOTIA

Dr. Dobson Gets Dalhousie Post

Dr. John W. Dobson, well known Halifax dentist, who has been practising his profession in his native city for 21 years, has accepted appointment to the post of Professor of Dentistry in the School of Dentistry at Dalhousie University.

In accepting the full time appointment to the faculty Dr. Dobson will find it necessary to discontinue his private practice.

He was graduated in dentistry from Dalhousie in 1927, having decided to follow the profession of his father, the late Dr. F. W. Dobson.

BRITISH COLUMBIA

Winter Program

With the holidays over, and late season hunting and fishing trips tapering off, the dental societies throughout the Provinces are swinging into action.

The Vancouver and District Dental Society were fortunate in securing Doctor Jankelson and his associates, from Seattle, for their October meeting. This study group present a clinic on Prosthesis, dissecting the subject into sections for ease of presentation to a large society. The Vancouver Society presented a similar group last year, and the great interest shown by members of the Society speaks well for the method. Doctor W. D. MacLeod, President of the Society, announced that throughout the season, among other clinicians they will present Doctors Massler, Sicher, Becks, Cantrell, Mowry and Weinmann. This would appear to suggest some outstanding programs for the members.

The Executive Committee of the British Columbia Dental Association resumed activity at a meeting held in Vancouver on September 22. Past president Harry Johns was over from Victoria, and President G. A. C. Wally was in the chair. Program and arrangements Committees were selected for the annual spring convention of the Association, to be held next spring in Vancouver, the second week-end in May.

Much discussion arose on the subject of federal aid to Public Health programs. A committee was set up to act with the other or-

ganizations which may benefit under the proposed plan.

The Interior Dental Society met on October 2, at Kamloops, B.C. where a clinic was given by Doctor Lloyd Jacobson, of New Westminster, on Amalgams. Local clinicians from the Society were Doctors, M. J. Butler, of Kelowna; F. J. Netherton, of Penticton; M. H. Ottem, of Kamloops; H. L. Coursier, of Vernon; and F. S. Colman, of Vernon.

Officers of the Interior Dental Society were elected, as follows:

Hon. Pres. - - Dr. R. Mathison, of Kelowna

Pres. - - - - Dr. H. B. Smith, of Vernon

Vice-Pres. - - - Dr. M. J. Butler, of Kelowna

Sec.-Treas. - - Dr. F. S. Colman, of Vernon

Representatives - - - Dr. R. L. MacDonald, of Kamloops; Dr. G. D. Campbell, of Kelowna; Dr. J. R. Day, of Penticton.

From our Victoria correspondent, Doctor Alec Gunning, we learn that the Victoria Dental Society has prepared a full program for the season. Doctor Art Webster is their President, Doctor Charles Westwood Vice-President, and Doctor Westwood, Jr., acts as Secretary-Treasurer of the Society.

The Inter-City Gold Foil Club, with members from Victoria, Vancouver and New Westminster, is busy preparing an outline of activities for the winter.

Doctor Lloyd Jacobson, of New Westminster, will present his clinic on Amalgams before the initial meeting of the Interior Dental Society, at Kamloops. This Society is made up of members from the Okanagan and nearby districts.

Flood Contributions

A recent issue of the Journal carried a part of the story of flood conditions in the Province which prevailed last May and June. At that time, the British Columbia Dental Association, working with the College of Dental Surgeons, the Vancouver and District Dental Society, the Victoria Dental Society, and other local dental groups, undertook to raise a fund in aid of flood victims. A letter of appeal was sent out to every member of the profession in the Province, followed, in many instances, by a personal approach. It is impossible to state definite results of the undertaking, for many donations were made directly through banks

and other local organizations. However, all records available were compiled, and the result would indicate that the total sum raised will approach five thousand dollars. This would represent an average contribution of ten dollars or more, from each registered dentist in the Province.

Vancouver Dental Assistants' Association

The first meeting of the fall session of this Association was held in The Good Eats Cafe with 64 members present.

Dr. K. Berry was the speaker of the evening. His subject was: "Transplantation" after which with the assistance of Dr. W. Gregarak he demonstrated Hypnosis and its application to dentistry.

ALBERTA

Dental Alumni Elect Dr. Kendal

Dr. P. J. Kendal, of Edmonton, was elected first president when the Dental Branch of the University Alumni Association was organized at a dinner meeting at the Macdonald. More the 100 dental graduates of the university attended.

The event was held in connection with the refresher course in dentistry being held at the university. This attracted dentists from other provinces as well as from many parts of Alberta.

Dr. W. H. Swift, deputy minister of education and president of the Alumni Association, addressed the group.

Naming of officers resulted in Dr. F. Gowda, of Edmonton, being elected vice-president. Dr. H. E. Bulyea, retired director of the school of dentistry, was elected honorary president.

The meeting also was addressed by G. W. Auxier, Edmonton barrister, and Dr. H. A. Gilchrist, former professor in the faculty of dentistry. The soloist was Miss Berneice McBeth—*Edmonton Journal*.

Dean Hamilton Honoured

Dr. W. Scott Hamilton, Dean of the Faculty of Dentistry, University of Alberta has been elected a Fellow in Dental Surgery of the Royal College of Surgeons in England.—*Calgary Herald*.

SASKATCHEWAN

Saskatoon Dental Society

This Society has really started to work on the conference to be held here next June. As the host Society to the Conference of the Canadian Dental Association in co-operation with the Western Canada Dental Society—June 5th—8th—1949. They have plenty of work to do. Two meetings in September have been held and ten members of the local society travelled to Edmonton September 18 to meet with the executives of the C.D.A. and W.C.D.S. at the time of the opening of the new clinic at the Faculty of Dentistry of Alberta. There, they received many valuable suggestions and inspiration to make the forthcoming Dental convention a real success. All the committees have started to work and would appreciate all readers to remember the dates of this convention to be held jointly by the C.D.A and W.C.D.S. L.D.H.

MANITOBA

Community Honours Dr. E. H. Clark

Dr. and Mrs. E. H. Clark of Minnedosa were given a farewell banquet and reception by the town on the evening of September 29; prior to their leaving to reside on the west coast.

Dr. Clark has practised dentistry in Minnedosa for 32 years, served as mayor for 10 years and was a member of the Council for a total of 25 years.

During the war he was president of the Minnedosa Branch of the Canadian Red Cross.

On behalf of the town Mayor J. Burgess presented Dr. Clark with a car radio and Mrs. Clark with a bouquet of roses. It was announced that Mountain street was to be renamed "Clark Avenue" in his honour.

Dr. Clark also took an active part in dental organizations and for a time served as president of the Manitoba Dental Board.

Winnipeg Dental Society

Is the spirit of the Crusader still alive? After listening to Dr. Lloyd Jacobson of New Westminster, B.C. on October 18 at the first meeting of the Winnipeg Dental Society for the fall and winter of 1948-1949 one has no doubt of the answer.

When a dental clinician has the courage and

audacity to appear before at least one hundred members of the Society and tell them that in his opinion only five are practising good dentistry because of poor cavity preparation and neglect to remove all the decayed dentine, he has all the qualities of the crusader. A crusade includes vigorous concerted action for the defense of some cause or the advancement of some idea.

If what Dr. Jacobson says is true, and he says that he has the x-ray evidence to back it up, it is high time that his opinion was put in print or some means taken to present it to every dentist in Canada and the United States of America. It is difficult to conceive of a more shocking statement. It is difficult to believe that 95% of all practising dentists are so dishonest as to knowingly leave decayed tooth structure to be covered up by a filling. If this is being done it must be incompetence on the part of the operator and surely the men turned out from approved dental schools can hardly be so nearly 100% either ignorant or incompetent. If it is being done knowingly it must be to make money the easiest way possible and get away with it. That is too shocking to credit.

Dr. Jacobson presented a paper at the Seventh Pacific Coast Conference at Salt Lake City in July of this year entitled "Fine Amalgam Fillings". Copies were given to all present at the meeting of the Winnipeg Dental Society.

Dr. Ivan Jackson, the new president of the Society presided at the afternoon and evening sessions.

J.F.M.

Winnipeg Dental Nurses' and Assistants' Association

Miss Grace Dalmadge was the guest speaker at the October 15 meeting of this Association, her subject being "Child Psychology." Three changes have been made in the 1948-49 executive, Miss Irene Russell, Treasurer; Mrs. Mary Shepherd, Program; Miss Ethel Olson, Sick and Visiting.

F. JEFFREY

ONTARIO

Gift from Alpha Omega Fraternity

At a meeting of the Toronto Alumni Chapter of the Alpha Omega Fraternity held in the Royal York Hotel, Tuesday, September 14, the Faculty of Dentistry was presented with a com-

plete set of Cephalometric Equipment for use in securing precise measurements of the human skull.

The University of Toronto thus becomes the third school in North America to possess modern Cephalometric Equipment, the use of which will greatly assist research in the growth and development of the head and jaws. Orthodontists will find this equipment of great value in the study of their specialty.

The Alpha Omega Dental Fraternity is to be congratulated on the successful issue of more than two years of effort to secure funds for the purpose of this apparatus which effort is but one of many others so sponsored. Another project on a national scale was the collection of dental equipment, not being used, for shipment overseas as part of the program of "Supplies for Overseas Survivors", known as "S.O.S." Thus, an entirely new sphere of endeavour for the betterment of mankind is being explored by this Fraternity.

It will be recalled that in November of 1941 the Alpha Omegas furnished a mobile dental unit to the Canadian Dental Corps for use in World War II.

Dinner to Dr. A. D. A. Mason

A dinner in honour of Dean Emeritus A. D. A. Mason will be held at the Albany Club on December 13. The attendance will be limited to the available capacity of this club. Tickets may be obtained at the offices of the Royal College of Dental Surgeons, 211 Huron Street, and the Ontario Dental Association, 86 Bloor St. West, Toronto. Tickets \$5.00.

Surplus Funds from Dinner to Dean Ellis

The committee in charge of the dinner which was given in honour of Dean Ellis on November 14, 1947 are happy to report a surplus after all expenses were paid. With these funds, on behalf of all those who contributed, the committee purchased a rug for the office of the Dean in the Faculty Building.

D. W. GULLETT

Toronto Academy of Dentistry

The annual dinner of this society on October 21 marks the opening of the season's activities. President Dr. J. H. Johnson and his executive

arranged a splendid program and the meeting was well attended by the members whose numbers were supplemented by many guests. The speaker of the evening was the Honourable Paul Martin, Federal Minister of Health and Welfare and his address "Canada's National Health Program" proved interesting and timely. The complete text of this will appear in the December issue of this Journal.

President Johnson emphasized the Annual Winter Clinic of this association on November 25 at the Royal York Hotel. All dentists interested are urged to attend.

The Dental Nurses' Alumnae Association

The Alumnae held their first meeting of the year at the I.O.D.E. headquarters, with the president, Miss Marion Barton in the chair.

The guest speaker of the evening was a former Dean of Victoria College, Professor Emeritus J. C. Robertson, his subject being "Toronto and Your University". This was most interesting to all those present.

Mrs. Margaret Keene who is the convener of the Cancer Dressings asked the members to come an hour early so that the quota for the month could be helped.

The annual dance took place at Ramona Gardens on Oct. 28. This party was an informal one when members and their friends gathered to make the evening a real success.

TENTATIVE PROGRAM FOR 1948-49

- Sept. 22.*—Professor Emeritus J. C. Robertson.
- Oct. 6.*—Initiation Party for Student Nurses.
- Nov. 19.*—Mother and Daughter Banquet.
- Nov. 25.*—Winter Clinic.
- Dec. 1.*—Christmas Party.
- Jan. 5.*—Miss Dorothy Jutton, "Jewellery".
- Feb. 2.*—Annual Bridge.
- Mar. 2.*—Dean Ellis, Faculty of Dentistry.
- Apr. 6.*—Selected.
- May 4.*—Selected.
- May 16, 17, 18.*—Dental Convention.
- June 1.*—Annual Meeting.

Rotary Helps Dental Clinic

The Brockville Rotary Club has made its usual grant of \$400 to the Leeds and Grenville Health Unit for maintenance of its dental clinic in the elementary schools of Brockville, a project which was initiated by the Rotary Club.



Fifty-Eight Years of Dental Practice

According to eastern newspapers Dr. George P. Allen of Mount Forest, Ont., plans to retire in the near future. He is now in his 86th year and has practised at Mount Forest for the past 58 years following his graduation at the School of Dentistry, Toronto in 1890. It is stated that he continues to enjoy excellent health and has full use of his faculties but feels that the time has come for him to hand over his office to some younger man.

Dr. Allen has always taken a great interest in municipal politics, was mayor for nine years, and served on the school board for many years.

In the picture besides Dr. Allen is his daughter Mrs. Allen Hutchinson; her daughter, Mrs. George Patrick, and Mrs. Patrick's son, John Allen, aged 2.

Toronto Ladies' Auxiliary to the Academy of Dentistry

Mrs. A. F. Cooper, President of the Ladies' Auxiliary to the Academy of Dentistry presided at the opening luncheon held on September 16 at the Boulevard Club.

Mrs. J. D. Barnet introduced the guest speaker, Mrs. F. E. Wright, president of the Canadian Association of Consumers. Mrs. R. E. Johnston thanked Mrs. Wright on behalf of the Auxiliary.



**W. M. McTavish Dies Suddenly
On October 17**

The passing of "Bill" McTavish, as he was affectionately known to his friends, removes a familiar and highly regarded figure from the Canadian Dental Supply business.

Mr. McTavish entered the dental supply field in 1905 when he founded the National Refining Company; soon his twin brother R. A. (Angus) joined him and four years later R. J. (Bob) Dunlop became associated with them. These three have worked together continuously building an organization which reflects the high ideals and integrity of the founders.

Mr. McTavish was a fine public spirited citizen and a Christian gentleman whose generosity and special interests were not paraded in public view. He was a director of West End Y.M.C.A. as a culmination to his long activity in Boys' work.

In his Church life he was a senior elder of Alhambra United Church and served as superintendent of its Sunday School for 30 years.

Among the members of the dental profession from coast to coast he had many friends. He will be remembered for his

sincerity, his kindness and his friendly smile which was always ready to light up his face. No doubt he had his problems and disappointments like everyone else, but they never ruffled his genial composure. Among his colleagues in the dental supply business who knew another side of his nature, he was respected and held positions of trust and honour in their organizations.

In addition to his many duties as a business man and a good citizen he found time for many associations. He was a 32nd. degree Mason, a member of Lambton Golf and Country Club and of the Granite Club. But a very particular interest was Rotary Club of which he was past president. The "In Memoriam" notice in the club bulletin includes the following tribute:—

*"He was a friend whose heart was good;
Who walked with men and understood,
His was a voice that spoke to cheer,
And fell like music on the ear.
His was a smile men loved to see;
His was a hand that asked no fee
For friendliness or kindness done.
And now that he has journeyed on
His is a fame that never ends,
He leaves behind uncounted friends."*

The sincere sympathy of a host of friends is extended to Mrs. McTavish and his two daughters as well as two sisters and two brothers in their bereavement.

Academy Winter Clinic

Academy of Dentistry annual Winter Clinic will be held on November 25 in the Royal York Hotel, Toronto. There will be morning, afternoon and evening sessions, and all interested dentists are invited to attend.

Cancer Control Lectures

A series of 4 lectures entitled Oral Diagnosis and Cancer Control will be held on January 12, 19, 26, and February 2 at 8 p.m., the first will be held in Room 135 Physics Building, University of Toronto. The speaker on January 12 is Dr. Hamilton Robinson, Professor of Oral Diagnosis and Oral Pathology, Ohio State University.

**Dr. Harry S. Thomson Dinner
November 24**

A complimentary dinner will be held for Dr. Harry S. Thomson on Wednesday, November 24, in private dining-room No. 10

Royal York Hotel, Toronto, Ontario.

Tickets may be procured from any of the Committee: Dr. D. W. Gullett; Dr. Vernon Fisk; Dr. Arthur Poag; Dr. J. H. Johnson; Dr. Harold Swales.

EMPIRE NEWS

AUSTRALIA

A £4,000,000 Federal Dental Plan for Australia

At the Australian Dental Congress held in May at Perth, Western Australia, the President of the Australian Dental Association (Dr. Stanley Wilkinson) announced that a £4,000,000-a-year dental scheme is being considered by the Commonwealth Government and the Australian Dental Association.

He informed the Congress that the Association began discussions with the Minister for Health and Social Services last year on the fundamental understanding that the nationalization of the dental profession would not serve the best interests of the public.

Dr. Wilkinson added that the plan being formulated by the Government and the Australian Dental Association, which combined the best features of nationalization and individualism, was capable in twenty years of largely eliminating the necessity for the wholesale extraction of teeth and construction of artificial substitutes. A plan for widespread juvenile dental treatment had been attempted spasmod-

ically by the States, but it could be successful only if implemented on a national basis, with the necessary financial resources.

GREAT BRITAIN

The Fellowship in Dental Surgery

In April, 1945, a meeting with the representatives of the British Dental Association decided to recommend that the Council should grant a higher qualification and that it should carry the title "Fellowship" and should, in fact, correspond as nearly as practicable with the Fellowship in Surgery of the College. The new Fellowship is recognized by the General Medical Council as an additional qualification for registration in the Dentists Register.

The Council has elected 173 Fellows under the terms of the Supplemental Charter.

At the first examination, held in 1948, forty candidates presented themselves for the Primary Examination and eighteen were successful. Seven of these presented themselves for the Final Examination and three were successful.

GENERAL NEWS

National Health Insurance in Canada

The general council of the Canadian Medical Association, at the annual meeting let it be known that they are ready to cooperate with the Federal government if and when it inaugurates national health insurance. One official of the association stated they realize that the demand for improved distribution of medical care is strong and the association is trying to fit in with the government's proposed plan. The council reported they believe the government has already paved the way for national health insurance by conducting a survey of health service needs of all Canadian provinces and by granting money to provide for support of control of cancer, venereal diseases, tuber-

culosis, polio and other health services. The meeting agreed to help form a national prepaid medical plan which would coordinate scores of individually owned medical plans under a national body. They also approved the principle of a common schedule of doctors' fees across Canada.

"Canadian Medical Association Approves Gov't Health Scheme," *Manitoba Co-Operator* 5:3 July 1, 1948, per Public Health Economics.

Ten Year Health Program in U.S.A.

President Truman has given his hearty support to the ten year health plan for the nation as proposed by his Federal Security Administrator, Oscar R. Ewing.

Nearly one-third of the report is devoted to argument in support of government health insurance and exposition of alleged inadequacies of voluntary medical and dental care and hospitalization plans. However, institution of compulsory insurance by the federal government is placed third on the priority list. The first goal is to increase medical manpower—physicians, dentists, nurses and their auxiliaries; the second, expansion of the nation's hospital system so that at least 600,000 beds are added by 1960.

New Income Tax Ruling

For some time the Board of Governors of the Canadian Dental Association has been negotiating through their secretary Dr. Don Gullett, to secure income tax exemption for Dental Convention expenses. Success has crowned their efforts according to the following information received on October 18 from the Department of National Revenue.

Effective January 1, 1948, the reasonable expense incurred by members of the dental profession in attending the following Dental Conventions will be admitted for Income Tax purposes against income from professional fees:

1. One Convention per year of the Canadian Dental Association.
2. One Convention per year of a Provincial Dental Association.
3. One Convention per year of a Dental Society or Association of Specialists in Canada or the United States of America.

The expenses to be allowed must be reasonable and must be properly substantiated; e.g. the taxpayer should show (1) dates of the Convention, (2) the number of days present, with proof of claim supported by a certificate of attendance issued by the organizations sponsoring the meetings, (3) the expenses incurred, segregating between (a) transportation expenses, (b) meals and (c) hotel expenses, for which vouchers should be obtained and kept available for inspection.

None of the above expenses will be allowed against income received by way of a salary since such deductions are expressly disallowed by statute.

Compulsory Health Insurance

The recent recommendations of Federal Security Administrator Oscar R. Ewing that a

system of federal compulsory health insurance be established in the United States were described as "wishful thinking" by *The Journal of The American Dental Association* in its October issue.

Pointing out that many of Mr. Ewing's recommendations in his recent report, "The Nation's Health," are sound, the *Journal* asserts:

"It is recommended strongly that health, civic and congressional leaders study Mr. Ewing's report in its entirety, winnow the wheat from the chaff, file the recommendations for compulsory health insurance in the wastebasket and use the factual material as an aid in building a sane health service program for America."

Pacific Coast Dental Conference

After a lapse, due to war years and post war conditions, the Seventh Pacific Coast Dental Conference was held in Salt Lake City, July 12 to 16.

The scientific program of the meeting was of unusually high calibre. In addition to the many fine clinics presented by members within the conference area the program committee arranged for a number of prominent clinicians from other parts of the United States, as follows:

Dr. Ralph L. Ireland Lincoln, Nebraska
 Dr. Edward L. Ball Cincinnati, Ohio
 Dr. Harold L. Harris Denver, Colorado
 Dr. A. H. Schmidt Lincoln, Nebraska
 Dr. Don H. Bellinger Detroit, Michigan
 Dr. Stanley O. Tylman Chicago, Illinois
 Dr. Charles H. Kendall Milwaukee, Wis.
 Dr. LeRoy M. Ennis Philadelphia, Penn.

Dr. Harold Hillenbrand, Secretary of the American Dental Association, was present. He gave an address of great interest and broad vision on the subject "Dentistry Tomorrow".

The clinics were enthusiastically received and excellently arranged in the fine quarters provided by the South High School.

A wonderful program of entertainment was provided in the traditional friendly and hospitable Utah manner. One of the highlights of this entertainment was the concert given on the Tuesday evening by the celebrated Tabernacle Choir under the direction of J. Spencer Cornwall, accompanied by the famous Tabernacle organ. This marvellous organization, with its

rendition of the numbers presented, left the audience enthralled and many were heard to say that this in itself was well worth the trip to Salt Lake City.

Since its adjournment the conference has been saddened by the passing of Dr. A. E. Tripp, its president. It is fitting, however, that in the twilight of his life Dr. Tripp should have guided such a fine, friendly and successful meeting.

The Eighth Pacific Coast Dental Conference is to be held in Seattle, Washington in 1951. The following officers were elected to guide its affairs:

President:

Dr. F. E. Wood, Seattle, Washington.

First Vice-President:

Dr. H. M. Cline, Vancouver, B.C.

Second Vice-President:

Dr. H. E. Cafferata, Reno, Nevada.

Secretary:

Dr. C. C. Flood, Seattle, Washington.

Treasurer:

Dr. L. L. Foote, Seattle, Washington.

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**89th Session of American Dental
Association in Chicago,
Sept. 15-17**

The total attendance for the session was 10,213, a new post-war record.

Dr. Clyde E. Minges, of Rocky Mount, N.C., was installed as president. Dr. Philip E. Adams, of Boston, veteran secretary of the Massachusetts Dental Society, was unanimously named president-elect. Dr. Percy T. Phillips, of New York, secretary of the First District Dental Society of New York, was elected by acclamation as speaker of the House of Delegates. This is a new position created by the adoption of the new constitution and bylaws.

Parity of administration of the dental corps with the medical corps in all branches of the armed services was demanded in a resolution approved by the House of Delegates.

In several resolutions, the House of Delegates restated its wholehearted objection to compulsory federal health insurance. In one, submitted by the Council on Dental Health, the delegates expressed their disapproval of the recent national health report of Federal Security Administrator Oscar Ewing in which he recommended adoption of a system of compulsory health insurance. Delegates voted unani-

mously to send a communication to Mr. Ewing advising him of the A.D.A.'s interest in improving the level of dental health in this country and "that this goal can be accomplished effectively and economically through the four-point program of the A.D.A. based on expanded dental research, dental health education, dental care for children and participation in dental program planning by the representatives of the A.D.A."

Action was deferred on a proposed plan to reduce the size of the House of Delegates by approximately 40 per cent. At the 1949 session 388 delegates were accredited.

Dues for active members were set at \$12 annually beginning January 1, 1949. This is double the present rate of \$6 annually. Dues for student members were retained at \$3 annually instead of \$6 as proposed in the original draft of the new constitution and bylaws. Dues for affiliate (formerly Pan-American and associate, a new classification) members were set at \$10 annually. No dues will be assessed against life or honorary members.

With income from dues expected to be doubled during 1949, the House of Delegates voted appropriations for agencies of the Association totalling \$1,044,591 for the next calendar year. Estimated income for 1949 was set at \$1,052,100 leaving an estimated surplus for the year of \$7,509.

Delegates approved a resolution from the Committee on Legislation recommending that the Association ask Congress to extend federal social security laws to provide old age and survivors' insurance to the self-employed. Such an extension would permit members of the dental profession to be covered by federal social security benefits now available to wage earners.

On the recommendation of President Washburn, the House of Delegates authorized the Board of Trustees to appoint a commission to investigate the possibilities of conducting a comprehensive, long-range study of dental problems and practice similar to studies now being conducted by other professions. He said he favoured the stand taken by the Association: That health care, which includes dentistry, is the responsibility of the individual first, then the community and then the state. He continued: "Notwithstanding the tremendous amount of work which has been done by the Council on Dental Health of the American Dental Association in its attempts to educate the pub-

lic to the various known methods of prevention of dental caries and to the need of prompt dental care by the dentist . . . (we find) that dental caries are attacking the teeth of our children six times faster than we are able to take care of them. It has been stated that only 25 per cent of the people receive adequate dental care. It seems to me from the foregoing that there must be reasons or influences that we have not discovered to cause so many people to neglect their oral (mouth) health. Certainly our Council on Dental Health should not diminish its efforts to educate the public to the value of proper dental care as a health measure. But I respectfully submit that it might be well for the council to concentrate its efforts on a survey to learn, if possible, the reasons for people neglecting their teeth. I am of the opinion that if we could once learn all of these reasons we could then plan a program of education for both the public and the dentist which would have better results than any plans we have followed to date."

Dr. Washburn said that in order to anticipate some of the arguments in favour of state-controlled dentistry "we should take steps to find a way of locating dentists more widely in order to serve the public in rural areas, especially in the more sparsely settled districts."—*A.D.A. News Letter*.

F.D.S.R.C.S. (Eng.) Degrees Conferred

It has been announced that a group of outstanding Canadian dentists have been honoured by the Royal College of Surgeons of England. The following have been awarded a fellowship in Dental Surgery for meritorious service to the profession—

Stanley J. Bagnall, D.D.S., F.A.C.D.
Ernest Charron, D.D.S., F.A.C.D., F.I.C.D.
D. Prescott Mowry, D.D.S., F.A.C.D.
W. Scott Hamilton, D.D.S., F.A.C.D.
Harold Keith Box, D.D.S., Ph.D., F.A.C.D.

Harvey W. Reid, D.D.S., F.A.C.D.

In honouring these well known dentists, the Royal College of Surgeons in England has paid high tribute to Canadian dentistry.

Sugar and Dental Caries

The high consumption of sugar by American children is the major cause of tooth decay which is now occurring six times more rapidly than the dental profession is able to provide

corrective treatment, *The Journal of The American Dental Association* reported in October.

In a symposium of 11 separate articles devoted to dental caries (decay), leading dental scientists advanced new evidence showing that carbohydrates, particularly sugars, are directly responsible for dental caries.

Principal hope for overcoming the loss of teeth resulting from man's excessive appetite for sugar, the scientists agreed, lies in greater use of fluorides which have resulted in a 40 to 50 per cent reduction in decay in children and the development of other therapeutic agents which will help counteract the harmful effects of sugar in the mouth.

Dr. Robert G. Kesel, of Chicago, head of the department of applied materia medica and therapeutics of the College of Dentistry, University of Illinois, summarized evidence collected by more than 40 research workers in support of the theory that dental caries is initiated by acids resulting from the action of bacteria on refined carbohydrate foods in the mouth.

Dr. Kesel cited reports from Scandinavia, Italy, Japan and elsewhere which showed a decrease in caries activity in direct proportion to the extent of sugar restriction during World War II. He reported dental caries has increased since sugar has become more plentiful.

At present, Dr. Kesel is engaged in large scale experiments in the development of an ammonium ion dentifrice which holds promise of helping prevent dental caries.

Dr. Philip Jay, of Ann Arbor, professor of dentistry at the University of Michigan, reported a marked reduction in dental caries through the restriction of sugar in the diet. *Dr. Jay said that of a group of persons with rampant dental caries, 83.4 per cent of those who adhered for two weeks to a diet low in carbohydrates and free from sugar exhibited a marked reduction in dental caries.

Dr. L. S. Fosdick, of Chicago, professor of chemistry, Dental School, Northwestern University, said that mankind's present consumption of sugar is in excess of the ability of the body's protective mechanisms to prevent dental decay. He added: "Perhaps it was never intended that man should ingest the huge quantities of sugar he now consumes."

Old Age Insurance Plan in U.S.A.

The House of Delegates of the American Dental Association approved a resolution from

the Committee on Legislation recommending that Congress be asked to extend the federal social security laws to provide old age and survivors' insurance to the self-employed. This means that dentists would be eligible for such benefits if action by Congress is favourable.

Dr. Shearon Talks on Social Security in U.S.A.

At the recent annual meeting of the National A. & H. Association, Dr. Marjorie Shearon, legislative consultant, talked on the subject, "Will the State Take Over Your Business?" She declared that Republicans and Democrats alike are working for extension of social security, including cash sickness and cash disability benefits.

"Neither party thus far has been willing to ask whether or not this country really wants more social security or even any social security at the price which would have to be paid for the promised benefits. And when I refer to the price which would have to be paid I am thinking not alone of the crushing burden of increased taxes but far more importantly of the surrender of our freedom."

Pointing to the new concept of social security which is slowly but surely taking shape, Dr. Shearon said: "This new concept means that benefits must be large enough to enable recipients to depend on them entirely. Any idea that benefits shall bear a reasonable relation to the premiums has been abandoned. Proposals are being made in all seriousness to break down such integrity as the OASI trust fund was supposed to have. Thus it has just been recommended by the Advisory Council of the Senate Finance Advisory Committee that permanent and total disability insurance benefits be paid out of the OASI trust fund without any increase in taxes at the start. If a man can be insured for life for disability benefits of \$25, \$50, or \$78.75 a month without paying a cent, is he likely to pay heavy premiums to an insurance company for such protection?"

We are moving in the path all other countries have moved once they started on social security legislation. In the beginning, you are told it will help your business. In the end, you lose your business. *Eastern Underwriter*, July 2, 1948, per—Public Health Economics.

Toothbrushes

Four out of five of the toothbrushes now in use in American families are so badly worn or in such an unsanitary condition that they are no longer useful for oral hygiene, according to a survey reported upon in the September issue of the *Journal of the American Dental Association*.

The study, conducted through a group of families representing a cross section of the American population, revealed that 80.7 per cent of the toothbrushes in use by family members were in need of replacement because they could no longer be effective implements in mouth hygiene or because their use might injure dental tissues.

Approximately three-fourths of the unsatisfactory brushes were found to have bent, broken or matted bristles. The remaining one-quarter of the unsatisfactory toothbrushes, or one out of each five examined, were found to be unsanitary.

"The study provides adequate evidence that only a small percentage of the American public follows the oral hygiene practices which the dental profession believes are important in maintaining dental health. The remedy for this situation can be found only in an aggressive campaign to inform every individual of the value of the frequent use and renewal of the toothbrush".—*A.D.A. News*.

A Public Opinion Survey

The Harris Dental Society of Lancaster, Pa., sponsored a dental survey of public opinion under the chairmanship of Dr. B. Harry Silver. The study was made by the Wheatland Associates, a public relations counseling firm of Lancaster. The dental society's purpose in making the survey was to obtain information on the public's attitude toward dentistry and dental health. The findings will be used as basic data in developing an educational program which will encompass the facilities of radio, news services and a speaker's bureau.

The following opinions, attitudes and experiences were reported by 292 members of the lay public:

1. A majority of the 292 persons stated they visit a dentist every six months.
2. Sixty-three per cent think current dental fees are justified; 37 per cent believe they are too high.
3. Nearly all believe it is important to save

teeth, to replace lost teeth, and that mouth health is related to general health.

4. Sixty-four per cent believe a dental examination should be made when patients are admitted to a hospital.

5. Ninety-four per cent believe that orthodontic treatment should be provided for children who have malocclusion.

6. Sixty-seven per cent think it is important to treat deciduous teeth.

7. A majority believe dental examinations in schools are beneficial.

8. Ninety-five per cent believe free dental clinics should be provided for needy people of all ages.

9. Dentists ranked fifth among groups most important to the community in the opinion of the persons questioned. Physicians, clergymen, teachers and farmers ranked higher; manufacturers, workmen, merchants, bankers, public officials and lawyers ranked lower.

10. Forty-four per cent would not favour an installment plan for paying dental bills; 31 per cent would favour an installment plan; 25 per cent were indifferent to the proposal.

11. Eighty-four per cent are opposed to national compulsory health insurance.

12. Forty-five per cent believe they would receive a lower quality of dental care under a compulsory health insurance plan; 42 per cent believe they would receive the same quality of dental care; 13 per cent are of the opinion they would receive a better quality of dental care.

The age, sex and economic status of the respondents were distributed as follows:

SEX

Sixty-eight per cent were males.

Thirty-two per cent were females.

AGE

Fifty-two per cent were under 40.

Thirty-eight per cent were between 40 and 59.

Ten per cent were 60 years and over.

ECONOMIC STATUS

Forty-one per cent family income of less than \$3,000.

Thirty-seven per cent \$3,000 to \$5,000.

Nineteen per cent \$5,000 to \$10,000.—*Minneapolis District Dental Journal*, Sept., 1948.

Many long term investigations have started to try to uncover the lethal factors in our daily lives. Dr. Ansel Keys' group, for example, at the University of Minnesota is studying diet, physical activity, worry, and tension in a group of volunteers between forty-five and fifty-four years of age. This may tell us about the value of exercise after the age of forty. At a recent meeting of the Chicago Heart Association the value of Walter Camp's daily dozen exercises in keeping President Wilson's cabinet in fit condition was questioned. It was stated that Walter Camp died at sixty-six, and the only one who refused to take the exercises, Josephus Daniels, died at eighty-seven.—Howard B. Sprague, M.D. of Boston in Transactions of the College of Phy. of Phila.

IN MEMORIAM

Cyril Fallis McCartney, of Toronto, Ontario died suddenly at his home on October 2 at the age of 55 years.

Dr. McCartney was a life long resident of Toronto graduating from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1916. He served in the Canadian Army Dental Corps in World War I and on demobilization practised in his native city. He was a member of St. George's United Church.

Kenneth Marvin McPherson, of Toronto, Ontario, aged 31, died October 19, following a brief illness, from a heart condition. He was graduated from the Faculty of Dentistry, University of Toronto, in 1939.

He was a member of Simpson Avenue United Church and the Toronto Academy of Dentistry.

Dr. McPherson is survived by his widow, a daughter, his parents, a sister, and a brother, Dr. Donald McPherson.

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PREVENTION DES MALOCCLUSIONS

par LUDOVIC DEMERS, B.A., D.D.S., St-Romuald, Qué.

FORMATION DES DENTS

Pour bien comprendre les causes de la malocclusion et les moyens de l'enrayer, il est essentiel de savoir comment se forment les dents, leur façon de faire éruption et d'occuper dans les arcades les positions, qui leur sont destinées.

Chez un enfant sain, il y a d'abord formation des lames dentaires, une pour chaque maxillaire. Les lames donnent les bourgeons dentaires, qui, à leur tour, donnent les dents. (Des bourgeons surnuméraires amèneront donc l'existence de dents surnuméraires). Une fois la couronne de la dent formée, celle-ci commence à faire son éruption et sa calcification se continue, même après l'apparition totale de la couronne.

Il est important de bien connaître les dates d'éruption et de calcification complète. Vers l'âge de deux ans, les dents temporaires sont au nombre de vingt, dont dix dans chaque maxillaire. Elles se classifient comme suit, dans chacun: quatre incisives, deux canines et quatre molaires.

La première molaire permanente fait son éruption distalement à la seconde molaire temporaire, qui cédera sa place, par la suite, à la seconde prémolaire permanente. La première molaire permanente sera suivie, à son tour, par la seconde et la troisième molaire permanentes. L'éruption de ces molaires permettent le développement antéro-postérieur des maxillaires.

Les dents temporaires ont longtemps été considérées comme des dents, dont on doit se débarrasser. Ce n'est certes pas juste, car elles sont seules à être en fonction de l'âge de deux ans à sept ans, donc cinq ans. Quelques-unes sont en service de six mois à douze ans, comme elles sont en fonction pendant les années du plus grand développement physique et mental; sans elles, l'enfant ne peut compter sur une santé normale. L'enfant est donc sérieusement handicapé par la perte prématurée de ses dents, puisqu'il en a besoin autant que l'adulte a besoin de ses dents permanentes.

OCCLUSION NORMALE

Les dents temporaires sont disposées sur les gencives de façon à former deux arcades, arcade maxillaire et mandibulaire. Une ligne suivant les surfaces labiale et buccale des dents du maxillaire forme un segment d'ellipse, tandis qu'une ligne semblable pour le bas formerait une figure à peu près semblable, mais plus large qu'un segment.

Quand les dents sont en contact, il y a une relation entre le haut et le bas, telle que chaque dent, à l'exception de la centrale inférieure et de la seconde molaire supérieure, forme occlusion avec deux dents de la mâchoire opposée.

Les dents temporaires doivent être dans un alignement et une occlusion normale, vers l'âge de trois ans. (*fig. 1*). Un an ou plus après que les dents aient fait leur éruption normale et pris leur position

respective, le rapide développement des maxillaires est suffisant pour former un léger espace entre quelques-unes d'entre elles.

Cette occlusion est importante, mais plus importante encore est l'occlusion des dents permanentes. Pour assurer une bonne occlusion des dents permanentes, il faut y veiller au fur et à mesure que les

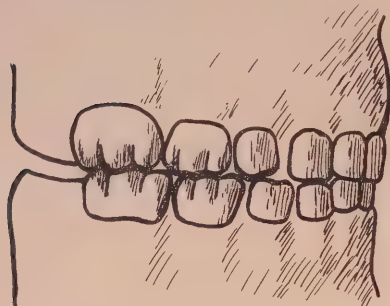


Fig. 1—Occlusion normale des dents temporaires, à l'âge de trois ans.

dents temporaires tomberont pour céder leur place aux permanentes.

IMPORTANCE DE L'ALIMENTATION

La bouche est le lieu d'entrée des aliments, c'est là qu'ils subissent la première phase de la digestion. Il est donc important qu'elle soit saine, c'est à dire qu'elle soit propre, exempte de caries et de lésions et garnie de dents bien constituées. Il ne conviendrait pas de parler de prévention de malocclusion, sans effleurer les moyens de constituer des dents saines, pendant la période de développement. Un enfant, comme un adulte, doit prendre des repas bien équilibrés, comprenant une quantité suffisante de minéraux: spécialement, calcium, phosphore, vitamines, surtout les vitamines D et C, et d'autres facteurs de soutien, pour fournir un apport de nutrition convenable pour les dents. Comme la calcification des dents temporaires commence vers la 17e semaine de la vie intra-utérine et à la 26e, pour les dents permanentes, la nutrition de la mère, dans l'attente d'un enfant, doit être considérée comme un facteur dans la croissance de ses dents. Les effets d'une alimentation défectueuse, chez

une mère en grossesse, se font sentir autant sur elle que sur son rejeton. Il est évident que, chez cette mère, il se fait un drainage considérable des réserves de calcium pour les besoins du fœtus en formation.

Nous pouvons conclure qu'il est fondamental de s'occuper d'une bonne constitution dentaire avant d'aborder le problème préventif de la malocclusion.

CAUSES DES MALOCCLUSIONS

Les principales causes de malocclusion, pendant la croissance et le développement de l'enfant, peuvent se résumer comme suit:

1) Hérédité: elle est souvent la cause d'absence des latérales supérieures et des 2ièmes prémolaires inférieures. Cette cause est inévitable puisqu'elle est inhérente à la nature même de l'individu.

2) Bec-de-lièvre: causé par un arrêt de développement, qui empêche la soudure des bourgeons de la face. Il n'est pas héréditaire. Il peut être la cause de malocclusion très grave. Les dents, ne pouvant compter sur leur pression réciproque, ni sur une bonne formation de l'os alvéolaire, font éruption pêle-mêle. Le bec-de-lièvre se corrige par l'opération, mais le chirurgien doit pas oublier qu'il doit tenir compte de l'éruption des dents, sinon il ne saura pas éviter la malocclusion.

3) Ankylose temporo-mandibulaire: produit un arrêt de développement de toute la mandibule et de la rétrognathie. L'étage inférieur est diminué de hauteur. Les dents se placent comme elles le peuvent, à cause de la diminution et de la suppression de la mobilité condylienne. Ordinairement, les incisives sont en labio-occlusion.

4) Macroglossie: la macroglossie est une condition pathologique affectant la langue, qui est plus grosse que la normale. La langue joue un rôle dans la formation d'une bonne occlusion; elle contrebalance la force des muscles des lèvres, particulièrement de l'orbiculaire. Si la langue est trop grosse, nous aurons un "open bite", c'est-à-dire une labio-version de toutes les dents antérieures et une ouverture béante entre les dents su-

périeures et inférieures, quand la bouche est fermée.

5) Syphilis: elle peut engendrer des anomalies de croissance, d'implantation et surtout de nombre.

6) Les maladies à haute température: la rougeole, la scarlatine, etc. . . attaquent le tissu épithélial. (absence de dents, anomalies de forme, etc.)

7) Absence de dents: les absences de dents peuvent être congénitales ou héréditaires.

8) Dents surnuméraires: elles font éruption presque toujours en malocclusion et souvent dérangent l'occlusion normale.

9) Troubles des métabolismes du calcium et du phosphore: ceci peut amener l'éruption de dents mal calcifiées, sans résistance.

10) Rachitisme: trouble de développement, se traduisant par une altération de la moëlle osseuse et une absence de calcification. Il est souvent dû à une alimentation déséquilibrée, au manque de vitamine D, à la carence solaire (rayons ultraviolets). Il peut en résulter des troubles de calcification dentaire ou un simple retard de dentition. Le rachitisme se manifeste assez souvent par une contraction du maxillaire supérieur et un aplatissement de l'arc incisif du maxillaire inférieur.

11) Les troubles endocriniens: le développement proportionné et régulier du corps humain est réglé par le système endocrinien. Les principales glandes, qui entrent en cause, sont la thyroïde, les parathyroïdes, les thymus, l'hypophyse, les surrénales et les glandes génitales. Parmi ces glandes, la thyroïde et l'hypophyse, et à un moindre degré, le thymus et les surrénales peuvent produire des déformations maxillo-faciales. Ces glandes produisent des troubles sur l'organisme, selon qu'elles sont en hypo ou en hyperfonctionnement.

HABITUDES VICIEUSES

Les malocclusions sont le plus souvent dues aux mauvaises habitudes. Les plus connues sont:

1) Le succion des doigts et du pouce: cette habitude a pour mauvais effet de labialiser les dents antérieures, de creuser la voute palatine.

2) Mauvaise succion pendant l'allaitement: déformation de la voute palatine, qui souvent se traduit par une contraction de l'arcade et un avancement des dents antérieures, un septum nasal dévié, un manque de développement de l'orbiculaire des lèvres et des troubles digestifs.

3) L'habitude de se mordre les joues peut aussi amener des contractions des arcades par la pression continue, qu'exercent les joues sur les dents.

4) L'habitude de se sucer la lèvre inférieure peut déterminer un "open bite", de la même façon que celle de mordiller un crayon. (Fig. 2).

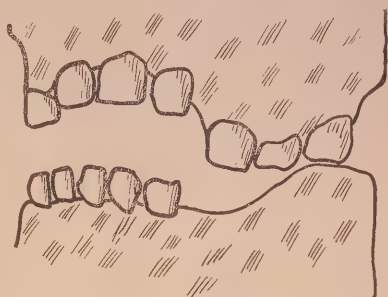


Fig. 2—Cas d'open bite, dû au mordillement de la langue.

Il faut éviter à tout prix que ces différentes actions, apparemment inoffensives, passent à l'état d'habitude chez les jeunes enfants; c'est dans l'enfance souvent que se prennent des habitudes, qui durent toute la vie; ces manies sont très pernicieuses, puisqu'elles peuvent produire des déformations graves chez l'individu en formation. (Fig. 3).

Quant aux autres causes de malocclusion, telles que l'extraction prématurée des dents temporaires ou leur rétention prolongée, elles feront l'objet de considérations, plus bas.

PERTE PREMATUREE DES DENTS TEMPORAIRES

Tous les orthodontistes s'accordent à dire que de nombreux cas de malocclusion sont dus à la perte prématurée des dents temporaires. Il apparaît même que l'extraction prématurée d'une ou deux dents temporaires peut causer un dom-

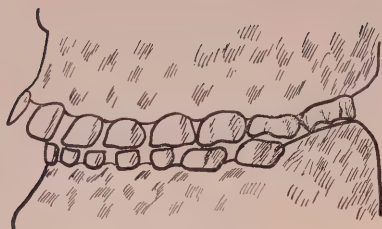


Fig. 3—Cas de respiration buccale.



Fig. 4—Cas de prémolaire incluse, dû au manque d'espace.

mage aussi considérable dans l'alignement et la régularité de la seconde denture que peut le faire la disparition prématurée de quatre, six ou huit dents.

L'âge de l'enfant, au moment de l'extraction, est un facteur pertinent quand on considère les possibilités éventuelles. Supposons le cas de la perte d'une molaire temporaire avant l'âge de huit ans, nous pourrions remarquer une contraction considérable de l'arcade, par radiographie, à l'âge où la résorption est évidente. Non seulement, il se fera une contraction de l'arcade dans plusieurs cas, mais la force de mastication et la mobilité naturelle des dents seront affectées. La molaire de six ans commencera une migration lente mésialement tandis que la première molaire temporaire et la canine migreront distalement. L'espace réservé aux prémolaires deviendra insuffisant et ces dents resteront incluses. (Fig. 4).

Cet espace ne peut perdre plus de 1.5 mm. pour le haut et 3.6 mm. pour le bas, car la largeur combinée des deux prémolaires du haut est de 1.5 mm. moindre que celles des deux molaires temporaires et celle du bas de 3.6 mm.

La perte prématurée de dents temporaires peut produire toute une kyrielle de conséquences, selon le caprice de la nature:

1) Contraction antérieure des mâchoires: souvent due à l'extraction des incisives.

2) Contraction latérale, soit d'un côté ou des deux à la fois, due à l'extraction d'une ou deux molaires temporaires.

3) Dents incluses ou en éruption ectopique.

4) Mauvaise hauteur d'occlusion.

Les remèdes à ces pathologies sont la dentisterie opératoire ou les appareils de maintien. (Fig. 5, 6, 7, 8).

LES APPAREILS DE MAINTIEN

Si par malheur, une dent temporaire a été extraite et, qu'après surveillance, les dents avoisinantes semblent vouloir restreindre l'espace, il faudra de toute nécessité employer un appareil de maintien.

Le docteur Cohen cite une expérience entreprise à l'Institut du Bien-Etre de l'Enfance, à l'Université du Minnesota, en examinant périodiquement des bouches d'enfants d'âge pré-scolaire, ayant perdu leur molaires prématurément, sans avoir porté d'appareils de maintien. L'objet de l'étude était de déterminer la fermeture inévitable de l'espace, son degré, et sa fréquence; ces recherches portaient aussi sur la fatalité d'une inclusion ou d'une malocclusion des arcades, comme conséquence de la perte prématurée de dents temporaires. Voici ses conclusions pratiques:

1) De la perte prématurée de la seconde molaire temporaire résulte fréquemment une fermeture extensive de l'espace, causant une contraction et forçant les dents permanentes à prendre une position anormale dans l'espace. Donc, toujours employer un appareil de maintien dans le cas d'une extraction de la deuxième molaire temporaire: soit pour prévenir l'éruption ectopique de la dent de six ans ou pour conserver l'espace des prémolaires.

2) Ces appareils sont essentiels pour maintenir les molaires permanentes dans leur position respective. Ceci prévient la contraction des arcades dans le cas d'extraction prématurée d'incisives.



Fig. 5—Type de maintien, à la suite de l'extraction des deux molaires temporaires.

3) Leur existence est requise dans le cas de plusieurs extractions prématurées de temporaires. Dans ces cas, il faut fabriquer des appareils de maintien sous forme de dentiers partiels.

Bien que les indications pour un appareil de maintien varient avec chaque cas particulier et aussi avec les parties de la bouche, il semble y avoir parmi les auteurs un accord général pour les contre-indications aux appareils de maintien:

1) Chez les enfants, qui ont subi des extractions presque totales. Dans ces cas, le dentiste, n'ayant plus de dents de soutien, devra avoir recours à l'orthodontie.

2) Si les follicules des dents permanentes sont absents.

3) Dans les cas où la dent de six ans fera son apparition en dedans de six mois.

4) Dans les cas où un appareil sera fixé sur une dent, dont la disparition surviendra avant l'accomplissement du travail de l'appareil.

Quels genres d'appareil employer?

Les appareils de maintien se divisent comme suit:

a) les pièces mobiles:

- 1) pièces coulées;
- 2) dentiers partiels;
- 3) plaques de rétention.

b) les pièces immobiles:

- 1) les ponts fixes;
- 2) les bagues cimentées sur lesquelles sont soudés des fils d'orthodontie ou des crochets.

Dans le choix d'appareils, le praticien devra tenir compte:

- 1) du développement de la face et des

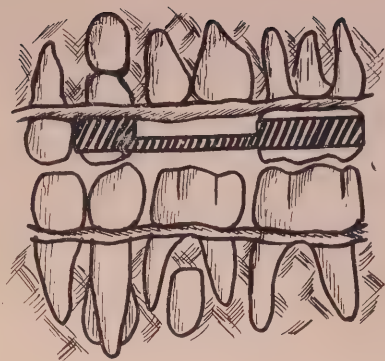


Fig. 6—Perte prématurée de deux molaires temporaires. Emploi d'un appareil de maintien pour permettre l'éruption des prémolaires.

mâchoires, qui ont une croissance de trois dimensions; la croissance latérale est la plus importante.

2) de la solidité des dents, qui serviront d'appui.

3) des dates d'éruption des dents.

Les pièces coulées, les dentiers partiels et les plaques de rétention (plaques d'acrylique avec fils d'orthodontie) pourront s'employer dans le cas d'extractions multiples.

Les ponts fixes seront utilisés dans les cas d'une ou de deux dents absentes.

Les bagues constituent les appareils employés le plus souvent.

1) la perte prématurée des deuxième molaires sera traitée par une bague cimentée sur la première molaire avec une tige recourbée et descendant sous la gencive; cet appareil pourra prévenir l'éruption ectopique de la molaire de six ans.

2) Dans les cas d'extraction de dents antérieures, les dents les plus importantes à maintenir en position seront (si elles ont fait éruption) les molaires de six ans. L'emplacement précis de ces dents est nécessaire à la bonne morphologie des arcades dentaires.

Pour réussir ce traitement, nous pouvons faire un appareil constitué par deux bagues cimentées sur les dents de six ans et reliées par un fil soudé passant linéairement aux dents antérieures.

LA CHUTE TARDIVE DES DENTS TEMPORAIRES

Théorie du phénomène

Plusieurs dentistes ont pu observer la présence de dents temporaires chez des adultes. L'apparente inoffensivité de leur présence peut être regardée comme la cause du peu d'attention, que portent les gens à ce sujet.

La nature nous a pourvu de deux groupes d'organes de mastication pour une conservation propre de l'économie

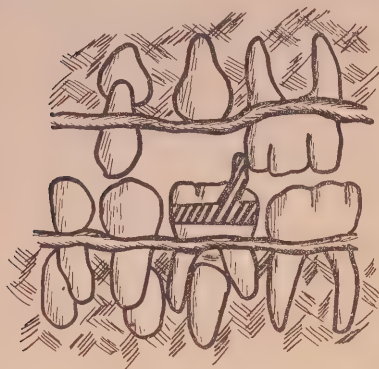


Fig. 7—Appareil de maintien placé sur la seconde molaire inférieure et destiné à maintenir la première molaire permanente supérieure.

corporelle. La succession de ces deux groupes de dents se fait de façon telle qu'en aucun temps de la vie la cavité buccale ne doit être privée d'une denture complète; ceci est réglé par les processus d'exfoliation des dents temporaires et l'éruption des dents permanentes.

En excluant le cas, où la résorption des racines des dents temporaires peut être empêchée par des moyens externes, comme la mort de la pulpe, Daskow en vint à la conclusion que la rétention des dents temporaires est due seulement à un métabolisme défectueux. Il observa que ces cas se rencontraient le plus souvent chez des individus atteints de tuberculose ou présentant une histoire de famille de cette maladie. L'idée se suggéra d'elle-même qu'elle pouvait être le résultat de ces formes désordonnées de métabolisme,

caractéristique de l'hypodiathèse, qui selon certains auteurs, est un facteur prédisposant à la tuberculose. "Par la théorie de l'hypo-acidité, qui est une condition de super-oxydation dans laquelle les hydratations sont supérieures au normal, et dans laquelle il y a une diminution de l'acidité organique aussi bien qu'une augmentation de chlorures salins excrétés de l'économie, nous avons une explication probable du manque de résorption et d'exfoliation dans certains cas."

Selon Pierce, la résorption serait due à l'action d'un acide liquide soluble sécrété par la cellule géante ou ostéoclaste, qui exerce une action dissolvante sur la racine: dans des conditions normales, ce processus prend à peu près trois ans et demi.

Le changement, qui se produit avec l'apparition de la première molaire permanente et la perte des dents temporaires prend le nom de seconde "métamorphose". Il est évident que la glande déterminante de cette métamorphose est la glande pinéale, parce que la métamorphose de l'apparition des dents temporaires est gouvernée par la thyroïde.



Fig. 8—Extraction des dents antérieures. Appareil destiné à maintenir les dents de six ans en position normale. (Suggestion du Dr Onil Hébert).

Avec la perte des dents temporaires, il semble y avoir une diminution graduelle de l'influence pinéale et une augmentation de l'influence pituitaire. De là, il semble qu'une simple hypo-fonction de la glande pinéale conduirait à la rétention des dents temporaires.

Les principales causes de la rétention

des dents temporaires, telles qu'établies par Morgan, sont:

1—Une résorption incomplète d'une ou plusieurs racines ou d'une portion de racine de la même dent temporaire résultant du manque d'uniformité dans le processus de la résorption.

2—Le développement tardif ou l'absence complète de remplaçante permanente.

3—Le manque de coordination entre les processus intermittents de résorption de la dent temporaire et les forces de développement et le mouvement d'éruption de la dent permanente.

4—L'extrême malposition de la permanente, qui a fait éruption.

Conséquences de la rétention prolongée des dents temporaires

Quand les dents temporaires saines avec une racine ou plus partiellement résorbée ne sont pas extraites à la première indication d'une rétention prolongée, la dent suivante, à cause de la pression de la temporaire, demeure incluse ou fait une éruption ectopique. Ce phénomène est plus commun au cours de la dentition supérieure que de l'inférieure.

En autant que Doskow fut capable d'en juger, les dents temporaires en rétention ne jouent aucune fonction dans la mastication, étant de 1/6 à 1/18 de pouce en dessous du plan occlusal des permanentes.

Dans les cas d'absence congénitale de remplaçante, la nature prévient la résorption normale de la dent et, il va sans dire, qu'ici, l'extraction est définitivement contre-indiquée.

Dans le but d'exercer une dentisterie des enfants satisfaisante, le dentiste doit être capable de déterminer si les dents temporaires saines doivent être enlevées et à quel moment.

L'ERUPTION ECTOPIQUE DE LA DENT DE SIX ANS

La dent de six ans, ou première molaire permanente, est considérée par les spécialistes en physiologie comme la "clef de l'arcade". Elle fait le pont entre

les dentitions temporaire et permanente. C'est elle, qui règle la position de toutes les autres dents. Son éruption ectopique est aussi malencontreuse que son absence totale.

La formation d'une bonne occlusion constitue l'événement le plus important du développement des dents pour la mastication et pour leur relation avec la croissance et le développement inférieur de la figure. L'éruption normale de la 1^{ière} molaire remplit certaines fonctions et son éruption en mauvaise posture gêne ces fonctions.

1) Cette dent garde les maxillaires en relation normale pendant la période de transition; par conséquent, éruption ectopique signifie fausse occlusion.

2) Elle contribue à l'élaboration de la moitié inférieure de la figure. Son éruption ectopique sera donc loin d'embellir une personne.

Les seuls moyens d'empêcher son éruption ectopique sont:

1) Une bague placée sur la 1^{ière} molaire temporaire comprenant une extension en forme de crochet, qui pénètre dans la gencive; si son éruption ectopique est due à l'extraction prématurée de la seconde molaire temporaire.

2) L'usage de la plaque de rétention destinée à replacer la molaire à l'aide d'un ressort, aussitôt que celle-ci commence à faire son éruption.

L'ERUPTION ECTOPIQUE DE L'INCISIVE LATÉRALE

C'est un mal à déplorer au point de vue esthétique. Nous pouvons remarquer au nombre des causes, qui peuvent la déterminer:

1) Un manque d'expansion des maxillaires; ce manque d'expansion est souvent dû, a) au rachitisme; b) à une mauvaise alimentation; c) à un mauvais métabolisme. Ici la dent se trouvera en torso-version.

2) A la rétention tardive de la latérale temporaire; dans ce cas, la latérale permanente poussera lingualemment ou latéralement et quelquefois distalement.

3) A l'extraction prématurée de la latérale temporaire. L'espace sera res-

treint par la migration distale de la centrale et la migration mésiale de la canine.

4) A la présence d'un frein anormal, qui maintiendra un espace entre les deux centrales et restreindra celui destiné à la latérale permanente.

Cette éruption peut avoir des conséquences sur toute l'occlusion en général. Elle pourra mésialer toutes les dents postérieures du même côté et donner, par la suite, une mauvaise occlusion.

Ces nombreuses causes peuvent être évitées par la fréquentation habituelle du cabinet dentaire. S'il n'est pas trop tard, le dentiste pourra diagnostiquer la cause et prévenir les dommages, soit par la séparation du frein, par l'extraction de la latérale temporaire ou par un appareil de maintien. Dans le cas de la contraction du maxillaire, il vaudra mieux référer le cas à un orthodontiste.

CONCLUSIONS

La prévention de la malocclusion poursuit un des buts le plus noble de la profession dentaire. Elle est nécessaire au bien-être physique, à la stabilité mentale et à l'adaptation sociale de l'enfant.

Hooton considère la malocclusion comme une des manifestations du déclin de la dentition humaine. "La malocclusion, dit-il, est particulièrement un phénomène de la civilisation moderne et elle aug-

mente de façon alarmante. Elle doit être combattue." Hooton ajoute plus loin que si la dentition disparaît, elle amènera avec elle l'espèce humaine.

Le dentiste de famille, s'il n'inclut le traitement de la malocclusion dans son programme, se doit de dire aux parents les besoins d'orthodontie requis par la bouche de leurs enfants. A cette époque où tend à se répandre l'éducation de la santé du peuple, la demande pour la prévention des maladies dentaires a progressé d'une telle façon qu'un plan de traitement préventif de la malocclusion naissante sied bien dans le champ du chirurgien-dentiste.

BIBLIOGRAPHIE

1. "Oral Diagnosis", Kurt H. Thoma, D.M.D., 1946.
2. "Text-Book of Dental Anatomy and Physiology", Russell C. Wheeler, D.D.S., F.A.C.D., 1943.
3. "Conduction Infiltration and General Anesthesia in Dentistry", Mendel Nevin, D.D.S., and P. G. Puterbaugh, M.D., D.D.S.
4. "Space Maintainers", W. C. McBride, Juvenile Dentistry, 1937.
5. "Contraindications for Space Maintainers in Mouths of Children", C. S. Calloway, J.A.D.A., juillet 1940.
6. Cours d'anatomie et de physiologie dentaires par Gustave Gauthier, D.D.S., 1944-45-46, Université de Montréal.
7. Cours de pédiodontie, par J. Lane Charpentier, D.D.S., Université de Montréal.
8. Cours d'orthodontie, par Paul Geoffrion, D.D.S., Université de Montréal.
9. "Retained Deciduous Teeth", Dental Students' Magazine, janvier 1947, Clarence E. McIntyre.

L'usage de la brosse à dents aux Etats-Unis

Les docteurs Allen O. Gruebbel et J. M. Wisan viennent de publier dans le JOURNAL OF THE AMERICAN DENTAL ASSOCIATION les résultats d'une enquête entreprise pour l'Association Dentaire Américaine sur les brosses à dents en usage dans les familles de ce pays.

Huit mille cent soixante et seize brosses furent examinées. Ces brosses furent envoyées aux auteurs par mille neuf cent vingt-neuf familles, à qui on avait promis une brosse neuve sur réception d'une vieille brosse.

Quatre brosses sur cinq (80.7%) furent jugées inutiles et même dangereuses et susceptibles d'occasionner une irritation des gencives; les trois quarts de ces brosses avaient leurs poils brisés, crochus ou émoussés; un quart de ces brosses présentaient des risques au point de vue hygiène.

Les enquêteurs recommandent l'usage fréquent et l'échange périodique de la brosse à dent, sans spécifier de préférence entre les poils de nylon ou naturels (80% des brosses sur le marché ont des poils en nylon). La profession dentaire se divise encore entre partisans des poils naturels et des poils en nylon. D'autres chercheurs sont à trouver quels poils causent le moins de dommage à l'émail des dents.



PAGES EDITORIALES

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Rédacteur:

GERARD DE MONTIGNY, B.A., D.D.S., M.Sc.D., L.C.D.

397 est Boul. S.-Joseph, Montréal

Assurance-santé au Canada

Nous recevions, au cours du mois de septembre, une lettre collective du secrétaire de l'Association Dentaire Canadienne, traitant d'observations, qu'il a faites en Angleterre, durant l'été, sur le système d'assurance-santé, établi dans ce pays.

La question d'assurance-santé est de nature à nous intéresser grandement, ici, au Canada, puisque tous les partis politiques du pays, libéraux, progressistes-conservateurs, etc., se sont tous prononcés en faveur, sous une forme ou une autre, d'un projet destiné à rendre plus accessibles à toutes les classes de la population les soins médicaux et dentaires.

Comme le dit le docteur Gullett, l'établissement d'un plan d'assurance-santé, en Angleterre n'a pas été le fait du gouvernement travailliste, actuellement au pouvoir, mais a été élaboré lentement par tous les partis régnant depuis quelques années.

On peut s'attendre, qu'au pays, un système semblable soit mis sur pied.

Depuis quelques années, le gouvernement fédéral multiplie ses enquêtes et compile des statistiques pour trouver une solution à cette question, qui est née de l'esprit socialiste, qui parcourt le monde.

Le geste du gouvernement, posé le 14 mai dernier, où des octrois spéciaux étaient accordés aux provinces pour entreprendre des enquêtes sur l'état et les besoins sanitaires des populations et pour construire des hôpitaux; où des sommes considérables d'argent étaient mises à la disposition des organismes publics de santé pour augmenter leur personnel et leurs disponibilités; ce geste est symptomatique.

C'était le premier pas officiel posé par l'Administration vers l'établissement d'un organisme d'état d'assurance-santé.

A cette occasion, des commentaires de presse disaient: *"Le gouvernement espère que dans deux ans un plan d'assurance-santé, du moins partiel, sera en opération au Canada. Nous croyons que l'hospitalisation sera d'abord réglée, ensuite les soins médicaux; plus tard les soins dentaires pour les enfants d'âge scolaire, suivis par les soins dentaires de toute la population."*

Les relevés faits en 1939, 1944, 1945, 1946 sur les revenus des médecins et dentistes par le Ministère du Commerce sont des indices des intentions du gouvernement dans l'évaluation des services de santé, cadrant dans le vaste plan d'assurance-santé. La chose aurait été plus hâtive, si l'accord proposé, il y a environ deux ans, entre les provinces et le pouvoir central avait été réalisé. On peut prévoir que si on trouve un terrain d'entente fédérale-provinciale sur les nombreuses questions en litige, l'organisation ou la mise en vigueur d'un plan d'assurance-santé sera, bientôt après, un fait accompli.

Il faut bien comprendre que la profession dentaire canadienne n'est pas opposée dans l'ensemble à un système d'assurance-santé pour la population. Les dentistes réalisent qu'il n'est pas facile aux petits salariés—surtout aux familles nombreuses—de consacrer un item pécuniaire assez onéreux aux soins dentaires adéquats de toute une famille. Les membres de la profession—plus que tous autres—se rendent compte de l'état lamentable de l'hygiène dentaire d'une grande partie de nos gens et souhaiteraient qu'une organisation nationale améliore cet état de choses et favorise un meilleur état de santé. Les dentistes connaissent les tendances modernes des populations, qui réclament d'avantage de leurs administrateurs. En un mot, les dentistes savent les grands avantages, qui découleront de la création d'un plan d'assurance-santé.

Mais nous savons aussi nous occuper de nos intérêts et nous voulons être consultés avant la rédaction de ces nouvelles lois. Nous pourrions être écoutés avec plus d'autorité, si nous formons un front commun, si nous centralisons nos revendications. Encore une fois, l'exemple des dentistes anglais devrait nous être une leçon; selon le Dr Gullett, notre secrétaire, la profession dentaire anglo-saxonne ne s'est pas trouvée en bonne posture pour revendiquer ses droits, par suite du manque d'unité dans ses rangs.

Nous avons la chance de posséder une organisation nationale, l'A.D.C., qui accomplit une tâche excellente dans ce domaine; elle surveille les faits et gestes du gouvernement, lui soumet des mémoires et prend bien l'intérêt du dentiste canadien.

GERARD DE MONTIGNY.



Dans le monde dentaire

Résolution de l'Association Dentaire d'Alberta

La résolution suivante a été adoptée par l'Association Dentaire d'Alberta à son assemblée régulière, tenue les 6 et 7 août derniers:

"Attendu que l'Association Dentaire Canadienne a toujours été forcée de solder son budget avec un déficit, chaque année;

"Attendu que l'Association a toujours été incapable de se constituer un fonds de réserve pour parer à toute éventualité pressante;

Attendu que, de toute évidence, le champ des activités de l'Association grandit toujours en face du développement des services de santé par les gouvernements et d'autres organisations et que les positions de la profession dentaire dans ces domaines doivent être maintenues à la page;

"Attendu que toute autre source de revenus supplémentaires ne peut venir que des Collèges provinciaux,

Il est proposé et secondé que, selon l'avis de cette association, les cotisations annuelles des Collèges provinciaux de l'Association Dentaire Canadienne soient augmentées jusqu'à concurrence de vingt-cinq dollars par membre de chacun des Collèges provinciaux. Le Comité Exécutif de l'Association Dentaire d'Alberta demande que copie de cette résolution soit envoyée à tous les Collèges provinciaux du Canada aussitôt que possible et que la question soit considérée avec soin.

Le Comité Exécutif s'engage à augmenter son octroi annuel à ce nouveau niveau, quand la majorité des membres se prononcera en faveur d'un tel geste pour que le bien-être de notre profession soit assuré.

Standards de base pour les services dentaires dans les hôpitaux

Le Comité des Services Dentaires Hospitaliers vient de publier un exposé détaillé des exigences primordiales d'un service dentaire dans un hôpital. Cette publication renferme quinze pages et on peut s'en procurer une copie en écrivant au Secrétaire, 211 rue Huron, Toronto, Ont.

De nos jours, on agrandit et on construit des hôpitaux dans toutes les régions du pays;

des plans pour l'établissement d'un département dentaire idéal dans ces nouveaux hôpitaux sont en demande partout; c'est la raison d'être de cet exposé, longuement mûri par le Comité, qui s'est occupé de cette question.

L'aide fédérale offerte aux provinces récemment pour la construction de nouveaux hôpitaux a stimulé l'intérêt, qui existait déjà, pour l'établissement, dans ces constructions, de services dentaires, qui seront au bénéfice intégral des malades et des membres de la profession dentaire.

Le Comité des Services Hospitaliers a bien étudié la situation et s'efforcera de fournir tous les renseignements supplémentaires, qui ne se trouvent pas dans ce pamphlet. La politique de l'Association sur ce problème a été approuvée à la récente réunion annuelle de l'A.D.C.

Augmentation de l'octroi à l'A.D.C.

Les provinces de la Nouvelle-Ecosse et du Nouveau-Brunswick viennent de décider l'augmentation de leur octroi, par tête, de \$8.00 à \$10.00 par année à l'Association Dentaire Canadienne. Cette décision prendra effet en 1949.

Quatre provinces, Alberta, Ontario, Nouvelle-Ecosse et Nouveau-Brunswick ont adopté cette échelle. Les autres provinces contribuent à raison de \$8.00, par année, par membre.

Bourses d'études pour la Santé Publique

Pour faire suite à l'octroi fédéral aux provinces en vue de préparer un personnel aux fonctions d'officiers de la Santé Publique, le gouvernement de la province d'Ontario annonce qu'il offre des bourses d'études pour un cours de Santé Publique, à raison de \$250.00 par mois, pour les hommes mariés et de \$200.00 pour les célibataires. Il est décrété que les postulants devront, par la suite, embrasser la carrière d'officiers de la Santé Publique. Cette offre est faite pour les habitants de cette province, mais il est probable que les autres provinces feront bientôt la même chose.

Plan d'assurance-santé dentaire en Alberta

Au cours de l'année dernière, la province d'Alberta a établi un système de traitement dentaire pour les pensionnés du gouvernement. Cette organisation est administrée, dans tous ses rouages, par la profession dentaire exclusivement. Ce système est le premier du genre mis en exercice, à la connaissance du comité. L'établissement de ce mode de traitement peut ou ne peut pas avoir des répercussions dans l'avenir. Le fait que les dentistes dirigent eux-mêmes cet organisme, à l'instar de fonctionnaires du gouvernement, est significatif et ce facteur entre dans les vues de plusieurs dirigeants, qui projettent des plans d'assurance-santé. Un rapport traitant de la première année de fonctionnement de cette organisation en Alberta est publié dans la livraison du mois de juillet du Journal. La province d'Ontario a approuvé un plan semblable, qui sera mis en acte probablement l'an prochain.



Professeur de marque à l'Université de Montréal

Photo prise lors d'un cours de perfectionnement en Chirurgie et Anesthésie buccales donné à la faculté de Chirurgie Dentaire de l'Université de Montréal, du 4 au 9 octobre.

De g. à d.: les docteurs Philip E. Blackerby, fils, chef de la division dentaire de la Kellogg Foundation, Gérard de Montigny, directeur du cours, Sterling G. Mead, assistant, Sterling V. Mead, de Washington, D.C., Etats-Unis, chirurgien réputé et auteur bien connu de volumes d'anesthésie et de chirurgie buccales. Ernest Charron, doyen de la faculté et M. Louis Cassanbon, trésorier de l'Université de Montréal.



Photo copyright Clifford R. Kopas.

Thunder Mountain, near Bella Coola, B.C.

Thunder Mountain, on the southern edge of Tweedsmuir Park, is heavily hung with glacier, whose growling and tumbling give the mountain its name. It is the centre of Indian mythology and a land-mark for many miles around. Recently there has been gold and other metals found on its lower slopes.

We live in deeds, not years; in thoughts, not breaths;
In feelings, not in figures on a dial.
We should count time by heart-throbs.
He most lives
Who think most, feels the noblest, acts the best.

Philip James Bailey.





L. G. ROBINSON, D.D.S.

New Westminster, British Columbia

B.C. Editor for the Journal of the Canadian Dental Association.
Graduated from McGill University in 1923, after returning
from the 1914-1918 war.

Practised in the Peace River country for some years;
moved to New Westminster in 1937.

President-elect of the British Columbia Dental Association.

Editor of the B.C. Dental News Bulletin.

District Scoutmaster for New Westminster.



The Journal

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DENTISTRY IN CANADA'S NATIONAL HEALTH PROGRAM*

by HON. PAUL MARTIN, Minister of National Health and Welfare

NEW FOUNDATIONS FOR GOOD HEALTH

IT IS always difficult, with our day-to-day preoccupations, to keep our own work in right perspective. But this annual meeting presents an excellent opportunity for your members to review the progress in recent years made by the profession of dentistry, and carefully to consider its future possibilities. It is also an occasion, I feel, for each one of you to take a look at all recent important developments in Canada affecting the course of your profession.

During the past two years, it has been my responsibility to make wide surveys of the whole field of health in Canada, in which dental health plays its significant role, and to continue the pioneer work done by my predecessors, especially in the latter years of the war, to strengthen the foundations of good health in this country.

The practical outcome of these surveys was the National Health Program that was announced by the Prime Minister in May of this year to one of the most enthusiastic sessions of the House of Commons that it has been my privilege to witness. This acclaim was well deserved because the new federal plans for Canada's health are not merely another great step forward, a commendable extension of

our present health services, not merely an indication of federal interest and federal support for work already being well done by the provinces. No, the reception that this Health Program received came from a conviction that here was something exciting, something dramatic, that would make for tremendous new developments in Canada's health and hospital services.

There is always a sense of elation in breaking fresh ground, and I must confess that the pleasure I felt in helping to prepare this Program is renewed by each new evidence that I now receive daily that our original faith and enthusiasm was not misplaced.

Tonight, I should like briefly to review this National Health Plan and to relate its objectives, in some degree, to those of the dental profession. I should like also to indicate how the development of this Program might extend dental services in Canada, both by increasing the scope of dental public health and by making dental services more easily accessible to many Canadians who are now barred by distance from taking full advantage of them.

As I have said, the National Health Program is no mere extension of existing services. *It is the greatest single forward step ever taken in Canada's health history.* To those whose responsibility it is—and this must al-

*An address delivered at the annual meeting of the Toronto Academy of Dentistry, at the Royal York Hotel, Toronto, on October 21, 1948.

ways be one of the highest duties of government—to watch the level of national health and to take all precautions to preserve it, it became increasingly evident in recent years that while the provision of health services was, for the most part, a provincial responsibility, the cost of these services was weighing very heavily on provincial budgets. The health of this nation was being hampered by the financial inability of the provinces to institute the sort of health and hospital services that they considered necessary, and to attain the heights of good health that in a country as rich and resourceful as Canada should match the high level of our living standards.

When it was decided to make federal health grants-in-aid to the provinces, the action proposed was no mere faltering first step. It was a reaching out into entirely new fields in search of better health for all Canadians. It was clear that further health advances were necessary. It was equally clear that their cost would weigh heavily, perhaps too heavily, on the financial resources of the provinces. For these reasons, the Federal Government decided to throw some of its financial strength into the fight against disease without in any way interfering with the rights and the responsibilities of the provinces or trying to dictate their actual administration of the funds to be provided.

It was logical that this Program should be undertaken by the Federal Government. Health is, to a great extent, a *national* problem. Disease does not respect provincial boundaries. Moreover, since all Canadians contribute to the development of the nation's wealth, it is only fair that, in some measure, this wealth should be used to ensure that every citizen will have a reasonable degree of access to health services.

CANADA'S NEW HEALTH PROGRAM

(a) *Its Magnitude*

The magnitude of the new program

is evident. The additional federal appropriation of more than \$30,000,000 made available to the provinces under it each year is almost as great as the entire expenditure of the Health Branch of the Department during the previous 28 years of its history and of all governmental health expenditures of 15 years ago.

(b) *Thinking Behind the Program*

The Program itself is the result of long planning. Every expenditure that has been projected has been carefully reviewed in the closest consultation with the health authorities of each province. Every grant is thought sufficient to do the job that is presently possible. In some cases, of course, it will take time before the facilities and the personnel will be available for the full utilization of the funds provided each year. In the field of hospital construction this is not important because while \$13,000,000 a year will be provided, this sum will accumulate to make a total amount of \$65,000,000 that the Federal Government hopes will be fully expended by the provinces during the next five years.

(c) *Grant for Health Surveys*

Our federal health plans are based on clear thinking and hard facts. It is logical, therefore, that there should be provision for the expenditure of \$625,000 to enable each province to make comprehensive surveys of the adequacy of its health services and of its hospital facilities. As a result of these surveys, it should be possible for each province to make the best use of the funds it now has available and also to indicate its needs in order of priority.

In the field of dental health, in which you are especially interested, there is need for adequate and accurate information on the prevalence of dental disease, of which, up to the present, there are few public health records available. Such information is a necessary preliminary to the plan-

ning and organization of community dental health programs.

(d) Grant for Hospital Construction

To assist the provinces and municipalities in the building of new hospital accommodation \$13,000,000 a year will be available for at least five years on condition that both the provinces and the municipalities will each spend at least an equivalent amount. It is estimated that in the next ten years some 65,000 beds should be added to our present hospital accommodation. To stimulate the building of these new hospitals and to provide strong incentives for the building of perhaps 40,000 of these beds in the next five-year period, the federal government has taken this action. In five years the situation will be reviewed and the annual grant set at whatever figure seems necessary for a further period of five years.

The building of new hospitals to meet carefully established needs will serve, of course, to bring hospital facilities within reach of many thousands of Canadians that are now barred by distance from reasonable access to them. It will also mean that doctors and health personnel and, I have no doubt, dentists also, will be encouraged to move into the areas to be served by these new hospitals, but that formerly were ill-provided with hospital, medical and dental care.

(e) Grant for National Health Services

Besides providing for health surveys, and for the encouragement of new hospital construction, the federal plan makes available to the provinces annual grants, totalling in the first year some \$16,500,000 but rising in later years to \$22,500,000 annually, to provide for vastly increased activities in a number of the most important health fields. For example, annual grants of from \$3,000,000 to \$4,000,000 will be available to fight tuberculosis. To make a determined attack on cancer and to provide proper diagnosis and treatment for this dread disease,

an annual grant of \$3,500,000 will now be available.

To provide additional personnel, improved services, and considerable extensions of work to prevent and to cure mental illness, grants rising from \$4,000,000 to \$7,000,000 a year are now provided.

Grants of \$500,000 a year are available to assist in the care of crippled children, to train health workers, and to strengthen measures to control venereal disease.

There is also a grant rising from \$100,000 to \$500,000 a year, for public health research. This and the grant for the training of professional health workers will undoubtedly serve, in some degree, to further dental health research and to train persons in dental health care.

DENTAL HEALTH IN CANADA

The proper expenditure of all these grants will have their important effect on raising the general level of health in Canada. There is every reason why the dental health of Canadians can also be improved by means of these federal health grants. I note from a recent survey made in Ottawa of the dental health of some 7,000 children, from four to ten years of age, that 86% had defective teeth, and that each child had, on the average, nearly five cavities. Even more startling is the fact that 43% of these children reported that they had had no previous dental treatment.

The development of preventive dental programs, particularly for young children, attacking the dental problem where it begins, and the extension of dental health education, as part of the work of local health units, should be stimulated by the health grants. There should be, too, encouragement for the training of specially qualified personnel in the dental health field. The general public health grant has led to the establishment of divisions of dental hygiene in two provinces, New Brunswick and Saskatchewan. Here in Ontario, where you have had for

some years a dental division, I understand that plans are under way for the use of funds from the professional training grant for the training of public health dentists. There is evidence, all across Canada, of increasing interest on the part of the provinces in the planning, organization and extension of dental health activities.

It is encouraging to see this interest. Dental health is certainly a public health problem of considerable importance. As you well know, it has been estimated that fewer than 3% of our people escape tooth decay; the prevalence of dental disease is probably exceeded only by that of the common cold. There is evidence that dental caries occurs from five to six times the rate at which its ravages can presently be repaired by the dentists now available in Canada. While it is estimated that perhaps 30% of Canadians now demand adequate, regular dental care, it is still evident that most Canadians request dental care only occasionally, usually when extractions are required.

There are other aspects of the dental problem in Canada that are disturbing. There is the matter of distribution of dentists between rural and urban areas. According to a recent survey, 96% of Canadian dentists live in cities or small towns—71% of them in centres of 10,000 or over. It is clear, then, that the cost of dental care for the patient from rural and remote areas must be computed in terms of normal costs plus the cost of travel to and from the dentist's office. Besides poor distribution between densely inhabited areas and those more sparsely settled, there is a wide disparity between provinces. Saskatchewan, for example, has only one dentist for every 4600 people. Ontario, on the other hand, has two-and-one half times as many dentists for the same number of people.

Prior to the war, demands on the services of the dental profession were not as heavy as they have been in recent years. During the depression years there seemed actually to be a

surplus of dentists. Not so today. The present demand is such that present facilities for the provision of dental care appear to be strained almost to the breaking-point. And this, despite the fact that only one Canadian in three seeks early, regular and adequate dental care! It would appear, then, that there are far too few dentists in Canada to meet existing dental needs. Further, that at a time when Canada's national income stands at its highest level and when conditions of prosperity are more widespread than ever before, two out of every three Canadians, either from an insufficient awareness of their dental needs, or from the inability to purchase dental services, are not seeking those services. It would seem that more than prosperity is needed to encourage Canadians to avail themselves of the excellent dental care that your profession has to offer.

NEW ADVANCES IN PREVENTIVE DENTISTRY

To solve the dental problem there is a double job to be done: first, a job of education—to encourage people to help themselves by seeking the help of the dentist early, before they suffer dental ill-health; second, the job of vastly extending the facilities for preventive dentistry. A few years ago, perhaps, this would have been mere wishful thinking, but the encouraging advances made recently in the field of dental research augur well for the widening of the range of preventive dentistry.

The Dental Health Division of my Department is very actively engaged in both the preventive and educational fields of dental health. This Division, in cooperation with the health authorities in Brantford, and with the Ontario Department of Health, has under way a project which seeks to establish the value of fluorination of public water supplies in reducing the prevalence of tooth decay. The dental conditions of some 1,800 children in Brantford are being checked over a ten-year period,

during which time fluorine is being added to that city's water supply. As "controls" in this study, representative groups of children, equal in number to the Brantford group, are being checked in Sarnia, where there is no fluorine in the water, and in another Ontario city whose water supply has a natural fluorine content.

It is amazing to think that one part per million of sodium fluoride added to a community's drinking water might lead to such a startling reduction as from 40 to 60% in dental caries. The officers of my Dental Division tell me that while there are high hopes for this measure, in the light of present evidence there is not yet sufficient proof of its usefulness to suggest a widespread application of water-fluorination.

In addition to the treatment of water supplies with sodium fluoride, great interest is being taken by the Dental Health Division in the topical application of sodium fluoride to children's teeth, by which new cavities may be reduced by as much as 40%, according to certain competent observers.

Dr. H. K. Brown, Director of the Dental Health Division in the Department of National Health and Welfare, is currently engaged in a large-scale study, in cooperation with the Nutrition Division, of the dental problems of our Indian children, whose health care is also the responsibility of this Department. One of the results of this project, it is hoped, will be the institution of a comprehensive program of dental hygiene for the Indian population. Still another project under way is the large-scale study of the relationship between caries activity and carbohydrate consumption that is being conducted by Dr. H. R. McLaren, who has recently come to the Dental Health Division after having pioneered in Windsor two years ago as the first full-time municipal dental public health specialist to be appointed in a Canadian city.

LEADERSHIP OF THE DENTAL PROFESSION

Unless the number of dentists in

Canada is to be vastly increased to a number sufficient to give full dental treatment to all Canadians, some other method must be found to get around the fact that so few of our people actually now receive adequate dental care. It is encouraging to find the growing conviction in your profession that dentistry has a high civic duty and that the dentist cannot wait in his office for dental problems to come to him.

It is now realized widely in your profession that dentists have a responsibility to the people, who naturally look to you for leadership in the encouragement of good dental health, and that you should actively promote dental health education. In encouraging the wide development and application of preventive dentistry, you will bring the benefits of your skill and knowledge to more and more of your fellow-citizens you will derive great satisfaction from knowing that, through your efforts in cooperating in Canada's National Health Program good dental health will be brought within the reach of all Canadians.

Undoubtedly, many years will pass before preventive measures now being taken will have their full effect. Meanwhile, the maintenance of national prosperity and the development of health education should encourage a steady and increasing demand for dental care.

Public health dentistry is a relatively new field in which I know that your profession is trying hard to stimulate interest. I know, too, that there is general agreement, and this seems only sensible, that preventive dentistry should start with children. This has double advantage. First, it means better care for the children's teeth, and it means the development of good dental habits that should continue into adult life. It also encourages parents to take an increased interest in the care of their children's teeth, while becoming more conscious of their own dental health.

Under the National Health Program,

it is hoped that there will be a considerable development in the field of public health dentistry. It is expected that more of your profession will be attracted into this important work and that projects such as the dental health surveys of school children will be very considerably increased.

It is also hoped that such surveys will reach out more into the rural areas and small towns where there are so few dentists that special measures are required to make up for this serious deficiency.

There certainly is much to be done to raise the level of dental health care in Canada. I know that you were very hard pressed in recent years. I know that many of you either cheerfully accepted service in the Armed Forces or remained in civilian practice where, with perhaps only two-thirds of the normal strength of dentists available, you had to work long hours to meet the insistent demands of your patients.

Now that most dentists have return-

ed to civilian life and graduates from increased dental classes are making up wartime shortages, Canadians can confidently look to your profession for leadership, for awareness of new advances, for willingness to do research, which is the foundation of all health progress, and for the intelligent acceptance and practice of all new dental techniques that have been proved successful.

I have outlined the National Health Program in some detail because its implications are important to you. Every dentist in Canada should be fully aware of the splendid possibilities that are opening up for your profession to share in the grants now available and to do your full part to promote better health care for all Canadians. In initiative to seize this golden opportunity, and in vision fully to exploit it, Canadian dentistry, I am convinced, will not fail to follow the paths of Canada's new health program to heights of dental health not surpassed by any people in the world.

ANNOUNCEMENTS

Annual Convention The Canadian Dental Association

IN CO-OPERATION WITH

The Western Canada Dental Society

Saskatoon, Sask., June 5-8, 1949

Course in Caries Control

A faculty of seven prominent dental authorities will instruct a postgraduate course in "Recent Advances in Caries Control" which will be offered by the University of Illinois College of Dentistry on Feb. 11-12. The course will be directed by Dr. Robert G. Kesel.

The course will be held on a Friday and Saturday, immediately following the mid-winter meeting of the Chicago Dental Society. The course was formerly offered as an evening program over a period of weeks but the sessions have been combined for the convenience of dentists who do not reside in the Chicago area.

Enrolment in the course is limited. Registration may be made by writing to Dr. Isaac Schour, University of Illinois College of Dentistry, 808 S. Wood St., Chicago 12, Ill.

THE ADVANTAGES OF CONSERVATIVE PROCEDURE IN COMPLETE IMMEDIATE DENTURE PROSTHESIS*

by RUDOLPH O. SCHLOSSER, D.D.S., F.A.C.D., Professor Emeritus
Northwestern University Dental School, Chicago, Illinois

IT MAY be stated without fear of contradiction that in recent years immediate denture service has become one of the most popular phases of dental prosthesis. It may also be claimed with equal conviction, that this particular type of service possesses certain distinct advantages over other methods long routinely practised.

However, careful observations have all too frequently revealed that many patients, for whom immediate dentures have been made, suffer an early loss of much of the enthusiasm which they experienced at the time these dentures were placed into their mouths. This quite obviously indicates that there are some specific shortcomings in this kind of service which we must strive to overcome.

In this short discussion, it is my purpose to present to you an outline of the clinical and laboratory procedures that should enable you to obtain a reasonable maximum of the potential advantages for your patients, and help you to avoid, or at least cut down considerably the probable disadvantages that may result from a less carefully worked out treatment plan.

To begin with, it seems appropriate to enumerate what some of the advantages of immediate denture service are. Uppermost, so far as the patient is concerned, is the fact that he will be saved the embarrassment of exposing himself while he is totally edentulous. Next, he will suffer less functional disturbances if his partially edentulous state is not unduly prolonged, so far as this might affect his musculature of speech, mastication and facial expres-

sion. Lastly, he will be able to make the transition from natural to prosthetic dentition with greater ease and less discomfort.

As for the operator, his main advantage consists in his being able to copy with relative ease the form, size, colour and arrangement of the remaining natural teeth that are to be replaced. This applies also to the recording of the vertical dimension of the denture space and face in their present state. These pre-extraction records will aid him materially in selecting more suitable teeth, and in working out an arrangement of them more fully in harmony with the facial characteristics and the aesthetic and functional needs of the patient than might be possible without such records.

They will also help him to judge whether the arrangement, when found to deviate from an acceptable norm, should be modified and to what extent such a modification would be justifiable. This applies in like manner to the prominence of the alveolar bone and the probable indications for its surgical reduction. I am firmly convinced that whether the dentures are to be immediate ones or are to be placed at some subsequent time after the natural teeth have been extracted, that in the majority of cases the patient's best interests will be more adequately served if the rational or conservative clinical procedures are employed. This is true both in the preparation of the mouth for the reception of the dentures, as well as in their fabrication. This does not, however, signify that in certain specific cases a

*Presented before the Eastern Ontario Dental Association Convention, September 20, 1948.

more radical surgical treatment might not ultimately be more beneficial.

The following is an outline that we have used as a guide effectively for some time. This consists of a series of careful operations executed in orderly sequence, and will be found to produce very gratifying results without any undue complications.

1. *Case History:* This is made up of tabulated information pertaining to the patient's dental experience, particularly as it pertains to their natural teeth and to any form of replacement of those previously worn. It should also contain a notation of their age, their health and their mental attitude towards prosthetic dentures.

2. *Mouth Examination and Diagnosis:* This should include a thorough visual, digital and roetgenographic examination, with special observation of the free marginal gum tissues and depth of pockets about the necks of the teeth. The degree of prominence of the labial and buccal plates of the alveolar bone and any severe undercuts should also be noted. The labial vestibule should be checked to see that it will permit the placing of a thin labial flange on the denture without undue displacement of the upper lip, so that a surgical reduction may be avoided or minimized. The making and mounting of studycasts will be distinctly helpful in this connection.

3. *Prognosis:* This should be based upon a careful study of the mouth and of the casts, as well as upon the operator's experience with other cases. A prognostic setup of the case made on the study cast from which the teeth have been cut off, makes an excellent supplementary aid in determining modifications in the arrangement of the teeth, as well as in making a selection in accord with the laws of harmony and occlusion.

4. *The Extraction of Maxillary Bicuspids and Molars, and the Restoration of the Occlusal and Incisal Align-*

ment of the Mandibular Teeth: The latter must be done before the impression is taken into which it is planned to pour the opposing mandibular cast with which the teeth are to be occluded. The extraction of the maxillary posteriors should be done from 3 to 6 weeks prior to the taking of the upper impression to allow the healing up of the sockets. For the impression of the lower teeth, hydrocolloid or an alginate cream is recommended. The cast should be poured in stone.

5. *The Maxillary Impression and the Positional Relation Records:* My preference so far as the impression for an immediate denture is concerned is the sectional combination impression. I use an individually prepared acrylic resin tray for the palatal and buccal portions, and a soft metal tray for the labial section which may be taken either in plaster of Paris or in modeling compound. The palato-buccal section is taken in modeling compound and may be lined with a thin film of impression paste if desired. More recently, I have experimented with a specially made acrylic resin tray made with a labial flange and with perforations in the anterior portion. After this tray is checked for conformity with the mouth anatomy, a periphery is moulded in modeling compound after which the alginate cream or hydrocolloid is used to take the impression. By fitting this type of tray with an occlusal rim, the impression can be taken under "closed mouth" conditions which facilitates the moulding of the periphery in the modeling compound and after the impression has been completed, it can be used as the base for obtaining the positional relation records, thus cutting out one appointment and saving the operator considerable time.

As I use, and advocate its use to others, of an adjustable articulator, this means that I also employ a face-bow and a record of the protrusive relation. The former ensures the more correct mounting of the maxillary cast,

while the latter is used in setting the articulator condylar controls. The centric's relation record is obtained in freshly softened baseplate wax. It is the last of the three records taken and special care is exercised to incorporate the desired vertical dimension into it.

6. *The Rest Position of the Mandible as a REFERENCE POSITION in Registering the Acceptable Vertical Dimension of the Denture Space:* Because it has been found that the position of physiological rest of the mandible is relatively constant, and that the free-way space observed between the teeth normally approximates 3 mm., the following formula will serve in determining the acceptable vertical dimension of the denture space:—The vertical distance from the base of the anterior nasal spine to a line drawn transversely across the mental prominence of the chin while the mandible is in the rest position, minus 3 mm., may be accepted as the index for the vertical dimension of the denture space. After the wax record of centric relation has been obtained, it should be chilled to harden the wax and then replaced in the mouth. The patient is instructed to hold the record in occlusion and the distance is measured to see that it coincides with the previous registrations.

7. *Boxing-in the Final Impression, Pouring up the Stone Cast and Mounting the Casts on the Articulator:* If as previously suggested, the maxillary impression was used in the registrations and the records were checked for accuracy, the boxing-in of the impression will aid in producing better proportion in the non-anatomical parts of the cast. When it has hardened, it is mounted with the aid of the face-bow record, and the record of centric relation is used to mount the mandibular or occluding cast. After the plaster has thoroughly set, the condylar guide controls are set with the aid of the protrusive relation record. The maxillary impression is then removed and the cast is trimmed up.

8. *Making the Partial Set-up of the Posterior Teeth:* The only possible try-in that can be made for an immediate denture is the set-up of the bicuspid and molars. This however is quite an important step, for it not only permits a check-up of the selected teeth and their tentative arrangement, but it also permits an additional opportunity to recheck the vertical dimension and the centric relation via the occlusion of the posterior teeth. Should any error be detected at this stage, it is far easier to make corrections now than later.

9. *The Try-in:*—It is always advisable to reinforce the partial baseplate, whether they are made of wax or the resinous shellac. It is also well to employ a bit of the adhesive preparations to hold them in place while making the try-in. Prime consideration should be given to the vertical dimension and centric occlusion. If proper records were obtained originally, and the teeth were well occluded, the occlusion of the teeth in itself will act as a check of the relations. If desired, wax records can be made on the articulator and used in checking the relations. The median line, the overbite and overjet as well as the colour of the teeth should receive proper attention at this time. It can be seen that such a try-in is distinctly advantageous, then if it is found that either in the registrations, the mounting or in the selection or arrangement of the teeth, some error has been made, much trouble can be avoided by making the corrections at this time.

If on the other hand, no errors are detected, this appointment affords an opportunity to permit the patient to view the result thus far achieved, and the operator may discuss the contemplated modifications of tooth arrangement and other necessary details. The time thus spent will be amply compensated for in a decidedly wholesome effect on the patient. It is also wise to once more note the extent of the free marginal tissues, to note if the overjet present has perhaps been un-

duly increased as a result of a labial drift of the upper teeth, and to ascertain to what extent this might be safely reduced by setting the teeth more toward the lingual. Proper attention given to all of these details will materially simplify the rest of the work and do much to produce better results.

10. *Setting the Maxillary Anterior Teeth and Preparing the Denture for Processing:* The partial trial denture is now thoroughly cleaned and dried and replaced on its cast. The articulation of the posteriors is scrutinized and necessary corrections of the occlusions are made to establish a good balance in the lateral and protrusive relations. This is one of the most important steps in providing functional stability for the denture.

Before cutting of the anterior teeth from the model, the median line should be scribed on to it above the peripheral outline. The lines denoting the amount of the marginal trimming to be done should also be made at this time. With a crosscut fissure bur held upward at an angle of 45 degrees, grooves are cut along these lines on the labial aspect. On the lingual, the cuts should be made more at right angles to the long axis of the teeth, and close to the gingival margins. The teeth are then broken out one at a time and a moderate depression is formed over the position of the sockets.

The teeth are replaced singly, thus permitting a closer reproduction of their position and resulting arch formation. Likewise, this method helps in making desired modifications when such are indicated. As each tooth is broken out, the margins should be made smooth and the teeth are fitted to their individual positions, beginning with one central and progressively removing and replacing one at a time.

As these teeth are being set in this manner, the overbite and overjet is worked out so as to ensure proper incisive contacts without interference. When all the teeth have been set, the arch is scrutinized for symmetry, as

is the incisal alignment. To ensure a desired uniform thinness of the labial flange and at the same time guard against a possible perforation in the polishing, a piece of 22 gauge soft metal is burnished over the labial surface of the cast and a film of wax flowed over it. The denture is then fully waxed-up; the festoons, rugae and singuli are carved. The cast is separated from its indexed mounting and the model denture is tinfoiled and invested. Routine procedure is followed to complete the processing of the denture, care being exercised in the packing of the mould, in the closing of the flask, in the curing of the resin and in the removing and polishing of the denture.

Owing to the severity of the undercuts present in most immediate dentures, the stone cast must be removed piecemeal to avoid a possible fracture. To make the remounting of the denture possible without again resorting to a *face-bow record*, after the denture and cast have been carefully removed from the investment, the excess acrylic is trimmed from about the teeth and an articulator wax record of centric relation is moulded. This can easily be done by having the incisal guide pin locked to maintain the vertical dimension, wetting the upper and lower teeth, placing some soft wax on the upper teeth and closing the articulator till the pin touches its guiding surface. The record thus made is chilled to avoid distortion. The cast is next removed from the denture, and after this has been polished the under cuts are filled with wax, the denture is placed in position on the record and reattached to its index.

This remounting permits the corrections of high spots and other occlusal disharmonies that may have resulted in the processing. This is done by spotting the interferences with the aid of articulating paper and removing them by judicious grinding and milling-in with abrasive paste. The latter can however only be done on the articu-

lator if the immediate denture is being made simultaneously with a complete lower denture. This can be more effectively done on the instrument than in the patient's mouth, but when the immediate denture is made to occlude with natural lower teeth, only the major portion of the spot grinding can be done on the instrument; the milling has of necessity to be done in the mouth. The less that is done in the mouth the more will the patient appreciate it.

11. *Extracting the Maxillary Anterior Teeth and Placing the Denture:* If the conservative procedures enumerated in the foregoing outline are followed out, their specific advantages will manifest themselves quite clearly when the patient comes to have the last teeth extracted and the immediate denture placed. First in importance is that there will be little or no trimming of bone to be done. Second, the very thin labial flange will not appreciably alter the facial profile and contour, while at the same time it will add considerably to the stability and retention of the denture. Third, not only will the retention be good from the start, but it will remain so for a considerable longer period than it would if a more radical treatment had been employed. Consequently, it will require less early and less frequent relining and rebasing. This factor adds much to the patient's comfort and satisfaction. Furthermore, the well balanced occlusion of the posterior teeth, plus the freedom from incisal interference during lateral and protrusive excursions of the mandible will greatly enhance the stability of the denture. The resultant stimulus of a well fitting, properly occluded denture will help to retard or arrest the resorptive changes in the residual bony ridge and thus materially prolong the service life of the denture effectively.

In a research project conducted several years ago by one of our graduate students, a comparative study was made of the *Rational* versus the *Radi-*

cal procedures in the preparation of the mouth for the reception of immediate dentures to ascertain their relative merits. The distinction made was, that where little or no bone trimming was done these were classed as rational or conservative, while those for which more extensive alveolectomies were done were classed as the radical procedures. Into the latter category were also placed the cases in which more than eight teeth had been left for the final extraction at one sitting, especially if some of these were molars.

In this series of test cases it was found that all which were subjected to the radical treatment suffered an early loss of retention and required relining and rebasings, and in some instances complete replacements. While those receiving the conservative treatment gave very satisfactory service for from six months to four years before they required such supplementary services.

Let me repeat what I have mentioned earlier in this paper, all this does not necessarily signify that the radical surgical treatments are to be condemned. On the contrary, there are many exceptional cases in which it must be employed to allow the attainment of the best possible results. Here again, let me point out that the mounted study casts and the prognostic set-ups of the teeth will serve very effectively to indicate the minimum amount of surgical reduction that may be needed in such cases, as well as to demonstrate what special modifications in the prosthetic operations might be relied upon to produce the most pleasing results.

We must not overlook the fact that there are other causes that contribute to the difficulties and failures encountered in the realm of denture prosthesis, whether we are dealing with immediate or subsequently made dentures. Among these are, faulty impressions and incorrect registrations both of the vertical dimension and of centric relation. The latter contributes

much to faulty occlusions, while an increase of the vertical dimension beyond the limits of biologic tolerance sets up a muscular tension that helps to bring about a more rapid resorption of the ridges. Perhaps the most pernicious single factor is the failure to establish balanced contacts in the second molar area. Failure of these teeth to occlude in the protrusive and lateral excursions, plus the usually accompanying interference in the incisal region because the establishment of an excessive overbite so often encountered in cases of complete upper dentures in conjunction with lingual bar lowers, has no doubt been responsible for the production of many of the flabby ridges.

I am fully cognizant that in this discussion I have placed a great deal of emphasis on some of the unpleasant experiences with which we are all fa-

miliar. May I assure you that this has not been done in a spirit of criticism, but rather for the purpose of calling to your attention some of the things that may help you to lessen your difficulties, in the future, not only as you engage in the making of immediate dentures, but that it may also aid you in solving some of your other denture problems.

To supplement what I have told you, I have brought along a number of slides of several interesting cases portraying by comparison the before and after appearance of the patients for whom we have constructed dentures in accordance with the outline I have presented to you in this paper, and to those of you who have attended the demonstration I have put on during this meeting, it is needless to tell you that I practise what I preach.

ADDRESS OF THE PRESIDENT OF THE MONTREAL DENTAL CLUB*

by J. W. ABRAHAM, D.D.S., Montreal, Que.

FOR the past ten years, with one crisis following closely upon another, the value of strong leadership has been demonstrated to mankind as perhaps never before. The expression "This uneasy age in which we live" has become so commonplace in our daily reading since 1939, that many of the rank and file of the present generation have come to believe that the world always has been in a state of turmoil. They are frankly skeptical that present conditions are any exception to those that have prevailed since the beginning of time, and certainly they believe that nothing can be done about it.

Fortunately, however, there are others with a keener sense of proportion, who realize the frailties of mankind, who admit frankly that mistakes have been made, but, who nevertheless

refuse to give way to despair, and are constantly labouring to rectify injustices and mediate grievances, labouring, in short, with the object of making this old world a better place in which to live.

In contemplating this noble profession of ours, it is not unnatural, therefore, that we should find similar conditions prevailing within it. The question at once arises "What are we doing about it?"

As one looks around about, one sees a comparative few individuals who have an altruistic attitude towards the profession. These give time and labour, both professionally and administratively, to build it up. But, alas, far too great a number of others may be classed as being apathetic towards any phase of Dentistry, that is not of im-

*Presented at the Twenty-Fourth Annual Fall Clinic of the Montreal Dental Club, October 27, 1948.

mediate concern to them in their own offices.

To these latter individuals an amalgam filling is scornfully referred to as "Only an amalgam"; they think only in terms of bridgework, dentures, etc., and care naught for the preservation of mouth health or prevention.

Among the dentists, there is an uneasy realization that the practices in the world of dentistry, of which we are all full citizens, fall far short of the ideals which practitioners honour with lip service. It is a growing consciousness that many who should have been working to close the gap between things professed and things done are for the most part complacently looking the other way. Recurring every day is the fact, that to many dental treatment is a business not a profession. Wealth brings freedom, freedom to venture down alluring bypaths that may lead to something or nothing. Freedom to work hard without thought of bills to be met to move at will here and there, to see, to enjoy, and to learn. But, freedom has chains and one must not forget the source of that wealth nor bite the hand which feeds him.

Particularly to the younger generation I say, recall Oct. 1929—the witching hour was striking in Wall Street, golden coaches turned into pumpkins, high-stepping white steeds to mice. The ball to last forever was over, the bubble had burst: what we thought we owned was gone and rest was hard to obtain. However, it jolted us out of the rut in which our lives were running and, after the shock, making a new start was before us. It has been suggested frequently that such a course is to be followed again, which I trust is not so. However, other dangers encompass us and unless we see the signals now, the end can be equally drastic.

Our inheritance from the war was that people were taught or became conscious of dental treatment through the army or perhaps they had money in their pockets. What are we doing about

it? I'm afraid that on the whole, my immediate listeners excepted, otherwise they wouldn't be at this meeting, we are going after the money and neglecting the finer points.

We must not forget that we must be creators not mechanics, that we are a healing profession not a business and we must serve the public. Of course money must be considered but should not be the prime factor. Our services should be available, within reason, as much as possible and, above all, our fees must not be outside the capacity of citizens to pay. The minute we do so we force these people who want this service, and who are going to get it, to look into other channels, which in the end is likely to do more harm than good.

The practice of dentistry today is largely corrective and restorative, as it will be for as far ahead as any of us can see. The habits and demands of civilization in which we now live make it so, but responsibilities which lie in the area of the prevention of dental disorders, the relation of the oral cavity, to the rest of the body must be given attention.

The dental profession must now realize that it cannot hope to care for dental demands by mechanical means alone. A substitute for a normal tooth or teeth is not as satisfactory as the original. Our attack therefore must be preventive as well as curative, which is not by any means a new idea.

Research into the causes of the disease must be continued, then further research into the control of caries.

Education for this type of work may now be received in our colleges, at least that is their endeavour, and is a possible opening for some of our youngest graduates.

This would seem to pass the onus to the young fellow but it must not be left there. Each and everyone of us must take his share of this problem, otherwise we as individuals may die prosperous but our chosen profession will have failed.

It is then asked what can we do about it? Well not one of us should think here am I, send the other fellow. Not one of us should dare proclaim we are not interested in deciduous dentistry. I won't take time to give you quotations on statistics on this point.

We do know that instead of a decrease in caries and its sequelae that there is an increase, and, that our present way of living under great stress and strain makes it more important than ever to keep all dentally fit.

To the younger graduates, and I said younger not youngest, because they should have had a few years of practice or its equivalent, I suggest that some consider taking the courses now available in universities for a diploma in Public Health. There is going to be plenty of need for individuals so trained.

The older graduates may educate their public. How often do you see or hear of a dentist talking dentistry or health at a layman's meeting and there are plenty of these associations that would be glad to listen? Of course this

is in addition to practising what is preached within his own office.

All graduates should be prepared to back up dental health programs by giving time both, in and out of their office to any program that is of an educational nature. If time, which is by far the most important factor, is not given, then healthy support by contributions would be in order, to be sure that those who have taken up lines of this endeavour be adequately reimbursed and their choice of calling made attractive to others.

Many small towns and districts of large cities have instituted schemes for dental health programs, some on their own, some with the assistance of the Red Cross. These are starters and it is time we studied them and made a commencement on our own.

This is each and everyone's problem and the quicker we realize it the better, otherwise it may be taken out of our hands and instead of being Kings in our own profession we may be the Pawns.

ANNOUNCEMENTS

Oral Diagnosis and Cancer Control Lectures

A series of 4 lectures entitled Oral Diagnosis and Cancer Control will be held on January 12, 19, 26 and February 2 at 8 p.m., the first will be held in Room 135 Physics Building, University of Toronto. The speaker on January 12 is Dr. Hamilton Robinson, Professor of Oral Diagnosis and Oral Pathology, Ohio State University.

Chicago Dental Society

The regular annual mid-winter meeting of the Chicago Dental Society will be held February 7 to 10, at the Stevens Hotel, Chicago. Hotel reservations should be made early.

Last week a Boston lady in her eighties asked me if it was all right for her heart for her to keep up her daily swimming in the ocean through October, and to ride her bicycle. She went out walking every day last winter, the snowiest winter on record, and fell down on the ice four times. But, as she said "I never hurt myself because I always fall as if I were drunk." I am sure she is not hypertensive.—Howard B. Sprague, M.D., of Boston in Transactions and Studies of the College of Phy. of Phila.

CHILDREN'S DENTISTRY IN OTTAWA*

by GEORGE K. CLARK, D.D.S., D.D.P.H., Department of Health, Ottawa, Ontario

IF I were an artist and were asked to paint a picture symbolizing the dental condition of the children of this city, up from my canvas would grow in drab dismal shades a multitude of children who, with their first few steps, were moving forward to meet a precarious future carrying on their shoulders the handicaps of facial deformity, malnutrition, systemic disturbances and emotional instability, and all for the want of adequate dental care.

For the past year it has been my job to evaluate the extent of dental defects among the school children of this city. What I have seen has been disturbing, for the conditions as they exist call for some straight thinking, frank discussion, and the concerted action of dentists individually and the profession as a whole.

It is not my willing intention on an occasion such as this to introduce a sombre note but I feel so keenly the necessity for prompt action that any method which will serve to be most soundly expedient is the path we should take.

I have no doubt but that the dental conditions as they exist here conform very truly to community conditions in almost every part of the province and indeed across Canada, but that being so lends emphasis to the urgency for each dentist to properly evaluate his position and his obligation in utilizing his skill by providing the children of his community with a service commensurate with at least their basic needs. This, from what I have seen, is not being done.

During the past year, we examined some 7,000 school children, 6,955, to be exact. I would like it to be understood that any subsequent statistical data pertains only to those children examined.

The age-groups involved in the survey were principally from 4 to 10 years of age. The over-all picture revealed that 85.5% exhibited defective deciduous and permanent teeth with the average number of 4.8 carious teeth per child. Of the 1,270 eight year old children examined, the caries index was 6.1 per child, the highest of the groups examined.

Forty-three per cent of all children reported having had no previous corrective dental treatment. With the five-year group, 48% stated that they had had no dental treatment of any nature. The percentage did increase more or less directly with the chronological age; so that more children were found to be receiving treatment as the age progressed.

With respect to the fillings charted it was found that only 3,440 deciduous teeth had had restorative work done on them and only 854 fillings in the permanent teeth. In other words, in the foundation teeth, for every two children, one child had one filling in one deciduous tooth; while one child in every eight had one permanent tooth filled. This, of course, is indicative of one thing. There is insufficient dental treatment being done for the children of the lower age groups.

Permit me to theorize for a moment on this point. There were, as I said before, 3,440 fillings charted for the deciduous teeth. I think it would be fairly accurate to take 30 minutes as the average time consumed for the restorative work on one deciduous tooth.

That being so, the 3,440 fillings would require 1,720 hours of work for one man. In one year's time a dentist would probably work 39 weeks of the 52, with a 44 hour week, or 1,716 hours a year. So that one man doing nothing but children's work could have

*Address Presented at the Public Health Dinner at the Eastern Ontario Dental Association Convention, September 21, 1948.

completed the 3,440 fillings himself in one year. But there are in Ottawa approximately 100 dentists. If, for one reason or another, 20 dentists do not operate on children, then we can place the responsibility of 3,440 fillings on 80 dentists which would mean that each dentist devoted 21.5 hours per year on the restoration of the deciduous teeth of children between 4 and 10 years of age. That means 2½ days out of a working year of approximately 270 days. This theorizing carried into the permanent tooth picture is twice as black. If only 50 dentists had devoted 5 hours a week to this work, the story would have read close to 20,000 fillings in deciduous teeth. With an equally small adjustment in office-hour planning, the complete picture for deciduous and permanent teeth would be very much brighter.

It is as utterly foolish to consider every general practitioner as a potential pedodontist as it is to look on every physician as a paediatrician, and we must recognize this as a given fact. But for those who do not work on children, and who do not recommend a man who does, is to my mind, a breach of faith not only with the public but also with the profession. To illustrate this point, I have a letter, which I shall keep nameless, that I would like to read to you. This is not the only letter or evidence I have but it will do to bring out my point. It reads: "I had my daughter to the dentist some little time ago and she returned a pink slip signed by the dentist. The dentist noticed the cavities in her teeth but said that unless they bothered her it was not worth while filling them. He, therefore, signed the slip as having completed the necessary treatment. He did fill one at the back which was due to faulty formation. He said to fill the others would cause unnecessary discomfort to my daughter and expense to me, and I wish to leave it at that as I have been going to him for the last twenty years and have great faith in his judgment."

That was the letter. There was a dentist, who, over a period of years,

had built up for himself confidence and trust in that family. He had unquestionably given many a fine service to that family, but he misinformed that parent, and in doing so, created a harmful psychological effect. That is not an isolated letter. There are many bits of evidence I have that indicate an inclination to excuse children's work on such flimsy grounds as "unnecessary discomfort" and "expense". We don't need to analyze those two reasons very deeply to appreciate their invalidity. If, in the control of communicable diseases, the medical profession advised parents not to have toxoiding and vaccination because of "discomfort", our records for the control of these diseases would mount shockingly.

I ask you, to face this question of children's dentistry squarely and if you do not operate on children, then suggest to that parent another dentist who does; but to possibly prejudice the health of a child for reasons motivated by nothing more substantial than personal disinclination is wrong, unfair, and a breach of faith with your patients and yourself.

Perhaps you think I'm belabouring this point, but for the past year I have absorbed a great deal of criticism of the profession from members of other professions, and from the public at our parents' meetings. I have been told time and time again that the dentists of Ottawa were not doing their share of children's work. I was hoping through the survey to publicly refute these accusations and to show that the dentists were doing as much as they reasonably could. I cannot show that, nor can I give a reasonable excuse for it. Each and every dentist may have his own personal reasons that to him are sufficient, but the grand total at the end of a year only shows up as inadequate dental care. One of the functions of a dental health department is to bring to light the dental conditions as they exist in a community so that the profession can take steps

to remedy the deficiencies that are brought into the open.

It is also the job of the dental health worker to instruct the public on the latest approved methods in the care of the teeth. We are constantly telling the public how important the foundation teeth are, how they should be cared for and why, and we shall continue to instruct and educate until as many parents as we can possibly reach in this city will appreciate the unqualified necessity for dental care for children from at least three years of age on; and the arguments of "unnecessary discomfort" and "expense" will be relegated to their proper place in books on fairy tales.

To meet the need for treatment among the dentally indigent children of Ottawa, the City Health Department has now two centres operating full time. These have been functioning since last spring. In organizing our treatment program, we accepted the advice of dental public health authorities and confined treatment to our youngest age groups, ranging in the main from 4 to 8 years. It is our objective to complete all of our clinic cases if possible up to and including Grade 2. Next year, we shall complete the new children and maintain the dental health of those already completed. It is an ambitious program but one well worth attempting, and within five years time we should see the good results of regular care. Also, we plan when possible, to institute pre-school clinic days, getting back to even younger age groups. We know that a program that has no plan as to age-groups treated is doomed to failure because of the insurmountable backlog of work. Our plan will, of course, necessitate the exclusion of the present older children. But, in order to get on top of this situation, a beginning must be made somewhere, and the beginning is naturally with the complete treatment of the youngest children available, and their maintenance in succeeding years.

Since the opening of our clinics, I can

report that up to August 31, Dr. Gail Marshall and Dr. M. Derrick have extracted 1306 deciduous teeth and 255 permanent teeth, but they have put restorations in 750 foundation teeth and 1,181 permanent teeth. Drs. Marshall and Derrick should be heartily congratulated for their excellent accomplishment.

In addition to restorative work, we now have sufficient laboratory equipment to make preventive orthodontic appliances where necessary.

Also we are using topical application of sodium fluoride routinely following prophylaxis. There is sufficient evidence to warrant this procedure, and so we are employing it as part of a planned immunization program.

After all this has been said, let us not go away with the misconception that cavities are all with which we are concerned. In our school survey we gather data that are pertinent to that child's dental standing. From that data we can graphically build up a picture of that child's whole dental condition, the general condition of the soft tissues as well as the teeth, the frequency of dental appointments, the habits of the child such as thumb sucking, lip biting, etc. A casual nutritional status of the child is considered. Malocclusion is noted and lastly cavities and fillings by surfaces are plotted on the chart, and please note that these come last.

To-night I stressed fillings because we are most desirous of having the majority of treatments done in dental offices and rightly so. The dentists must assume this phase as their responsibility.

However, the future is bright because we know we are on the right tack; but the measure of success achieved calls for the sincere, determined efforts of each individual working to his own master plan. More and more, and still more dentistry for children beginning with the youngest age groups is the key to a nation healthier in body and in mind, because of healthier mouths. In your hands rests that key.

Complimentary Dinner Tendered To Dr. Harry S. Thomson, F.A.C.D.

by T. R. MARSHALL, Asst. Editor

ON November 24 a group of more than one hundred professional friends gathered in Toronto to do honour to a much admired and greatly respected Canadian dentist in the person of Dr. Harry S. Thomson. Colleagues came from Ottawa, Pembroke, Belleville, Hamilton, Brantford, Owen Sound and other places to be present in person and a sheaf of telegrams and letters from practically every other dental group from Halifax to Vancouver expressing greetings indicated that many of their members were present in spirit for the occasion.

Dr. Vernon Fisk, President Elect of the Canadian Dental Association was Toastmaster. In his opening remarks he referred to the guest of the evening as a builder of friendships because all across Canada his life has been devoted to bridging good relations between both the public and governments with the dental profession. In this connection he recited a poem by Will Allen Dromgoole entitled "Bridge Builder."

An old man, going a lone highway,
Who came at the evening cold and gray,

To a chasm vast and deep and wide,
The old man crossed in the twilight dim,

The sullen stream had no fear for him,

But he turned when safe on the other side,

And built a bridge to span the tide.
"Old Man," said a fellow pilgrim near,

"You are wasting your strength with building here,

Your journey will end with the ending day,

You never again will pass this way,
You've crossed the chasm deep and wide,

Why build this bridge at even tide?"

"Good friend, in the path I have come," he said,

"There followeth after me to-day,
A youth, whose feet must pass this way,

This chasm that has been as naught to me,

To that fair haired youth, may a pitfall be,

He too, must cross in the twilight dim—

Good friend, I am building this bridge for him."

Others present spoke of Dr. Thomson's attributes and achievements. Dr. Arthur Ellis, for many years associated with him on the Canadian Dental Hygiene Council, said, "He is no doubt recognized as an authority on Dental Public Health and I am glad to pay tribute for his great service." Dr. Harvey Reid, Chairman of the Board of the Royal College of Dental Surgeons of Ontario said, "He is a man who was always kind, patient and understanding and who in his quiet way, exerted a great influence for good on all those with whom he came in contact. He had a inimitable way of talking about dental public health, and his accomplished work has been exceedingly well done."

"Dean Emeritus Mason, for many years an old friend spoke with great feeling: "Dr. Thomson, 'Harry' as we love to call him, came here many years ago from New Brunswick and Ontario has greatly benefited because he made that decision. He has enriched dentistry and the lives of those with whom he has worked. He is a man of convictions, with sincerity of purpose, honourable motives and blessed with tact and diplomacy. One of his great achievements in Ontario has been his assistance in helping to establish the diploma course of D.D.P.H. in the School of Hygiene, University of Toronto in 1941." Dean Ellis remarked on the excellence of Dr. Thomson's good judgment and on

his habit of always coming along to give a fellow a boost, when he needed it most. Dr. Swales, Chairman of the Ontario Dental Public Health Committee, eulogized the guest of honour by reading many telegrams and letters from friends all across Canada. The Honourable Paul Martin, Minister of Health and Welfare, wrote—"You are the pioneer Public Health Dentist in this country and have been foremost for 30 years." Dr. Harry S. Brown, Director of Dental Health in the Health Department wrote, "You have introduced more knowledge of public health into dentistry and more knowledge of dentistry into public health than any other dentist in Canada."

Dr. S. A. MacGregor speaking of the achievements of Dr. Thomson outlined some of his activities. He graduated from Tufts College in 1906. He began practice in Moncton, N.B. but answering the call to serve His Majesty he joined the C.A.D.C. in 1916. On demobilization in 1920 he was appointed Director of Dental Health Education of the Canadian Oral Prophylactic Association. In 1924 the Canadian Dental Hygiene Council was organized and Dr. Thomson became its Field Secretary which post he has held for 24 years.

Dr. Thomson is a past president of the New Brunswick Dental Association and a life member. He is also an honorary life member of the Ontario Dental Association. He is a past Secretary of the International Association for Dental Research. He was Vice President of the American College of Dentists in 1947-48 and in July of this year was elected to its Board of Regents. He is an Honorary life member of the Canadian Dental Association; has been its representative on the National Council of Nutrition for 4 years and is at present Chairman of its Public Relations Committee.

These are the highlights of recognition awarded this outstanding dentist and great Canadian. It was Dr. MacGregor's privilege on behalf of many friends to present Dr. Thomson with a



DR. HARRY S. THOMSON, F.A.C.D.

wrist watch as a token of esteem and appreciation with best wishes for still many years of useful service to his beloved profession.

In replying Dr. Thomson, always a brilliant speaker, made perhaps his most able and challenging address. In the beginning he acknowledged the honour of the evening and with emotion still in his voice proceeded to pay tribute to his many friends who had helped him as he said "To achieve any success I have had."

As he reminisced about his experiences over the years from coast to coast he pictured how Dental Public Health has taken hold and is now really growing. As evidence he pointed to the four Provincial Governments who now have a dental division in their respective Provincial Departments of Health: Ontario, Manitoba, New Brunswick and Saskatchewan.

"Dental Public Health within our own profession," said he, "is a spiritual thing; when you grasp its importance

and understand it, it does something to you It elevates the profession and is a bridge between it and the people. It is a great revitalizing force."

Then as the speaker looked to the future he visualized the possibility of a little boy coming home from school and asking his Dad—"What are false teeth?" "Oh Son," said he, "They are funny things people wore in your great-grandfather's time when people lost their teeth by dental diseases." Continuing Dr. Thomson said, "It is a far away hope perhaps, that some day artificial teeth will be unknown, but not an impossibility. There is no smallpox any more and I can visualize the end of Tuberculosis . . . I like the thought expressed in the little poem entitled 'Hills to Climb,' written by my friend Dr. George Clark of Woodstock, N.B.:—

"I must have hills to climb,
When the last hour comes for me
to live,
God give me strength to foot the
winding path
To the topmost upland, where a
white birch stands
In stately splendor throned against
the blue:
Here let my soul take shift,
Up—ever up—
Explore the kindred hilltop of the
sky,
Where the sweet, sacred dreams of
youth
Shall know and welcome me, their
vagrant child."

And so he challenged his audience and through them dentists everywhere to become active in Dental Health education—"Teach the mother", said he, "for whom you are making dentures, how to prevent her baby from needing them."

Then he concluded, "It is a grand work, it is worthwhile and satisfying. I have enjoyed it all the way."

HOW ABRASIVE NEED A DENTIFRICE BE?

by PAUL C. KITCHIN and HAMILTON B. G. ROBINSON

College of Dentistry, Ohio State University, Columbus, Ohio.

Summary of paper in Journal of Dental Research, August, 1948.

Stained pellicle is not produced by liquid dentifrices, but results from accumulation of stain on the teeth of certain individuals using water or other nonabrasive dentifrices. The degree of staining is an individual characteristic.

Using groups of dental students who were heavy stainers with brush and water, we determined staining of their teeth while they were using a series of commercial dentifrices of different degrees of abrasiveness. These dentifrices varied from water, which is practically nonabrasive when applied with cross-brushing to the cervical areas of teeth, to a commercial tooth powder capable of cutting a notch $4\frac{1}{2}$ mm. deep with 100,000 strokes.

Dentifrice abrasiveness greater than that necessary to cut 1 mm. per 100,000 strokes into the cervical area of teeth with the apparatus employed, appears to be unnecessary even for very heavy

stainers who would not constitute more than 20 per cent of a population. Only one of the commercial paste dentifrices tested was excessively abrasive for heavy stainers. The commercial powders tested, with one exception, were from 100 per cent to 300 per cent more abrasive than was found necessary to accomplish stain prevention in our tests on heavy stainers.

Generally speaking, for stainers with cervical exposure, a dentifrice with a safety index as high as is consistent with prevention of stain accumulation is desirable. Such a dentifrice should be determined on an individual basis.

Dentifrice abrasion, for obvious stainers, will be a necessary evil until a non-abrasive, stain-removing or preventing agent is found. Reliable current information on dentifrice abrasion, determined by testing whole dentifrices on dentine, should be available.

The Forum

THOUGHTS ON FLUORINE

by LEHMAN WENDELL, D.D.S., Minneapolis, Minn.

From Minneapolis District Dental Journal

The topical application of fluorine to the teeth as a means of lessening dental caries has been heralded as a great discovery, and the American Dental Association now recommends that all dentists use fluorine solution for the preservation of the teeth. Perhaps such a recommendation should not go unheeded by the profession. The word *perhaps* was used deliberately, because many of us have from time to time become enthusiastic over this or that new product, only to discover a little later that we have been pursuing one more will-o'-the-wisp. This has led to wariness on our part, and we approach anything new with caution.

Some time ago a group of dentists carried on experiments with fluorine, using what they thought was the true scientific approach. Two groups of children were kept under observation over a period of time. One group was treated with fluorine; the other group received no such treatments. At the end of the period it was found that the fluorine group showed less decay than the other group, but the difference was so slight that it wasn't worth talking about. Why did the untreated group show up almost as well as the treated group? Undoubtedly because the children had become tooth conscious and were taking better care of their teeth. They perhaps vied with each other to see who could come to the clinic with the cleanest teeth. Cleanliness plays an important part in tooth preservation.

So we come to the question, is fluorine the full answer? Can we hope to arrest dental caries by limiting our

attention to the oral cavity? What about the rest of the body? One would hardly attempt to cure smallpox by treating a single pustule; neither can one materially lessen tooth decay by ignoring the body as a unit. The human body is a machine that functions best when all parts work harmoniously. No one would think of running a car with low-grade gasoline and inferior lubricating oil, yet we do not hesitate to feed the human machine with low-grade, harmful fuel.

Let us pursue that thought a little farther. We are the victims of civilization. Civilization is a disease, brought upon man by his lust for power, pomp, and splendor. The easy-going life of primitive man is denied us. We ride to and from work and our muscles atrophy. We eat devitalized package goods and the body rebels. We breathe air that is constantly polluted by gas fumes and by the sulphuric acid that comes from the combustion of burning coal. Much of the ultraviolet rays of the sun is filtered out by the pall that hangs over every city, and we are thereby robbed of our full share of vitamin D. While none of us have a quarrel with those who advocate the use of fluorine, let us not forget that bone-building food is even more important. And if that bone-building food has been used by our forefathers, we are apt to inherit good teeth, because inheritance plays its part in the preservation of the teeth.

Food has more to do with bodily health than most of us realize. Whether we be living organisms that are

rooted to the soil in the form of plants, or that move about with fins, wings, or legs, the one thing that keeps all organisms alive is food; without it, death follows. The right food keeps the organisms alive and healthy throughout its allotted span of life; the wrong food brings ill health and premature death. Man's death unquestionably comes prematurely.

Thirty years ago Alfred Owre, then dean of the School of Dentistry of the University of Minnesota, made this statement: "I believe if there is any physical salvation for civilized man, it must lie in diet reform." The same conclusion has been reached by such men as Bunting, Hanke, Carpenter, Brekhush, McCullum, Sutherland, Ellis, Russell, to mention only a few, picked at random.

Occasionally, out of curiosity, I ask a young patient, "What did you have for breakfast?" The answer is a common one. "Oh, two slices of toast and a cup of black coffee." Now, how much nourishment did she derive from such a breakfast? What about the coffee? Don't make me laugh. Well, the toast, then? Let me tell you a bit of history. Many years ago I worked for a big milling concern in Tacoma, Wash. Every month we sent a shipload of white flour to China. We never attempted to ship whole wheat, rye, buckwheat, or oats, because those products would become wormy. White flour, on the other hand, could be sent to the most distant parts of the world without fear of it becoming wormy, because there wasn't enough nourishment in white flour to even feed worms. Yet, my patient, a presumably intelligent creature, expected to get nourishment from stuff that worms reject.

Well, you say, that was the girl's breakfast. She of course made up the deficiency when she ate her lunch. Did she? On several occasions I saw her at Walgreen's lunch counter. Her lunch consisted of a big slab of cake smothered with chocolate goo, a glass of

Coke, and two cigarettes. If I could also have checked up on her evening meal I most likely would have found that it consisted of four courses of foolishness. How much candy she ate between meals is anybody's guess. Now you fluorine enthusiasts, please tell me how much good would the application of fluorine do to such an individual? Even if she were to soak her teeth in fluorine for hours at a time, and if she were to take daily baths in the stuff, and were to drink it by the gallon, she would retard the final loss of her teeth by maybe a month or two. No, we must think of the body as a unit, instead of limiting our attention to a small part of the organism.

Speaking of candy, what is the use of preaching dental care to our patients, when in some of our Minneapolis schools they actually sell candy and soft drinks to the children? What a crime against youth!

"Man," says Robert Louis Stevenson, "is a disease of the agglutinated dust." Real health is as rare as a Model T Ford. In order to restore man to a semblance of what nature intended him to be, a whole army of healers of various kinds has arisen, and they sweat and stew and labour over ailing man, until they themselves fall early prey to the very ailments they try to cure.

Edward Carpenter, speaking of cultured man, has this to say: "He ceases to a great extent to use his muscles, his feet become partly degenerate, his teeth wholly, his digestion so enervated that he has to cook his food and make pulps of all his victuals, and his whole system so obviously on the decline that at last in the end of time a Kay Robinson arises and prophesies, that he will before long become wholly toothless, bald and toeless."

Fellow dentists, since the American Dental Association has put its stamp of approval on fluorine, let us—with crossed fingers—use it in our work, not in the belief that it will materially lessen dental caries, but merely to pla-

cate a now demanding public. And, as we apply it, let us temper whatever enthusiasm we may have for the stuff

by singing this little song: you can't cure smallpox by treating a single pustule.

DENTAL DEFECTS AND PERIODONTAL DISEASE IN EGYPT, 1946-1947

by CLARENCE E. DAWSON, D.C., U.S.N.

U.S. Naval Medical Research Unit No. 3, Cairo, Egypt.

Summary of paper in *Journal of Dental Research*, August, 1948.

1. Analysis of the dental records of 994 Egyptian fellaheen from Upper and Lower Egypt revealed 1.36 carious teeth per carious case.

2. The caries index was higher in Lower Egypt (1.1 average per person) than in Upper Egypt (0.81 average per person).

3. Periodontal disease varying from slight to severe was found to be present in 97.7 per cent of the study group.

4. Marginal gingivitis was the most common of the periodontal diseases found.

5. Periodontal disease bears a relationship to the amount and type of cal-ciferous deposits, malnutrition, and dental defects.

6. Malnutrition is strongly influ-enced by the high incidence of intes-tinal parasites.

7. Geographical distribution of perio-dontal disease was not considered sig-nificant.

8. Dietary insufficiencies, induced by intestinal parasites and inadequate food intake, in addition to oral sepsis are perhaps the most important pre-disposing factors to periodontal dis-ease in Egypt.

9. The yearly concentration of fluor-ides (0.71 ppm) in the water supply at Cairo, may be an indication that fluor-ine exerts a protective influence against tooth decay in Egypt.



IS VINCENT'S INFECTION CONTAGIOUS?

by HILDE FREY, H.D.D., L.D.S., (Glas.)

Excerpt from Dental Record, July, 1948

Do we tell the patient that Vincent's infection is contagious or not? We believe it will be safer to do so until there is evidence to the contrary. It is interesting to know that this disease is notifiable in 22 American States and is the only notifiable oral disease.

We believe that epidemic outbreaks of this disease cannot be compared with epidemics like cholera, e.g. where nearly every person taking contami-

nated water acquires the disease. In Vincent's the predisposing causes are the important factor and they are the same in certain groups of people, as e.g. in trenches, camps and prisons. As the Vincent's organisms are present in the mouths of a great number of the population lowered resistance of the tissue can cause endogenous proliferation of Vincent's organisms.

THE BLOOD AND ORAL SURGERY

by HERBERT J. BLOOM, D.D.S., M.S., Ann Arbor, Mich.

Summary of Paper in Jour. of Oral Surgery, Oct., 1948

It is difficult to present in detail the numerous links between the practice of oral surgery and haematology. The obvious fully developed oral manifestations of a blood dyscrasia are usually no problem to the oral surgeon. They are recognized immediately as being medical problems, and consultation with the internist is sought. The real pitfalls and hazards are those cases of blood dyscrasia in which the oral complication is relatively mild or may simulate oral disease on a purely local basis. Almost all of the diseases of the blood may exhibit oral signs, and it is important that the oral surgeon be aware constantly of these possibilities.

Examinations of the blood definitely must be requested whenever any of the following signs or symptoms are encountered:

1. Persistent oral infection which does not respond readily to local measures, or the presence of necrotic lesions of the oral mucosa.

2. Haemorrhage, either in the history, as a postoperative complication, as spontaneous bleeding from the gingiva or the presence of petechiae or unusual ecchymosis following minimal traumata.

3. Atrophy of the papillae of the tongue or persistent glossitis.

4. A persistent sore throat with cervical lymphadenopathy.

An indication of a blood dyscrasia usually can be obtained by taking a routine complete blood count and where indicated a platelet count, bleeding and clotting time and capillary resistance test. Abnormal findings necessitate further investigation which has no place in the field of oral surgery. These simple laboratory determinations are relatively inexpensive, require only a short time and actually may be life-saving measures.—*Department of Oral Surgery, School of Dentistry, University of Michigan.*

That we should do unto others as we would have them do unto us—that we should respect the rights of others as scrupulously as we would have our rights respected—is not a mere counsel of perfection to individuals—but it is the law to which we must conform social institutions and national policy, if we would secure the blessings and abundance of peace.—Henry George.



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Editorial

ROYAL COLLEGE OF DENTAL SURGEONS OF ENGLAND

by DON W. GULLETT, D.D.S., Toronto, Ontario

On May 20, 1947, His Majesty the King granted a Supplementary Charter to the Royal College of Surgeons of England which included in its terms power to establish a faculty of Dentistry and grant a Fellowship in Dental Surgery. This was a most notable event in the history of Dentistry in England.

In order to understand the significance of this event it is necessary to summarize briefly a few events in the history of the Royal College of Surgeons of England. In the 14th Century two corporations existed in London, namely, the Barbers' Company of London and The Fellowship or Guild of Surgeons. There was great rivalry between these two organizations. Eventually they were united and given powers to examine those who were to be permitted to practise. By 1684 the Surgeons began to find their association with the Barbers irksome and inconvenient, and petitioned for the dissolution of the union which finally occurred in 1745. In the dissolution of union the Barbers were privileged to retain the real estate and other property of the Corporation, and the Surgeons were forced to secure new property. The Surgeons first built a hall, known as Surgeons' Hall, at Old Bailey, and some 45 years later acquired the site now occupied in Lincoln's Inn Fields.

In the year 1800 this Company of Surgeons was re-incorporated and constituted under the name of The Royal College of Surgeons of London and was given the care of the Hunterian collection which constituted the beginnings of the museum. This collection is of interest to the dental profession

because of its dental content. Practically all dental historical texts make mention of Hunter's experiment of transplanting the tooth in the cock's comb which can be seen in the museum today.

Various changes were made under new Charters including the adoption of a new name—The Royal College of Surgeons of England. The right to hold examinations and grant licences to practice was obtained.

Seeking to raise the status of the dental profession, application was made at different times, by representatives of the dental profession, for recognition through examination and licensure by the College. This action was delayed partially through the differences of opinion which existed between two organizations representing the dentists. The Odontological Society, of which John Tomes was a leading figure, pressed for greater recognition of dentistry from within the realm of medical teaching and organization, while the other organization, namely, The College of Dentists, held out for the separate existence of dentistry as an autonomous profession. The eventual outcome was that the Odontological Society succeeded in 1857 in getting a clause inserted into a medical bill before parliament to grant The Royal College of Surgeons of England power to institute and hold examinations for the purpose of testing the fitness to practise as dentists and to grant certificates of such fitness. The passage of this bill by parliament inaugurated the Licence in Dental Surgery in England. Much of all that has followed in dental education in Great Britain dates back to this event.

A goodly number of dentists have obtained membership (M.R.C.S.) and a few held fellowship (F.R.C.S.) in the past by meeting the requirements for surgeons. From time to time a plea for higher qualification to be made available separately for dentists occurred. During the recent war several conferences were held between representatives of the College and the British Dental Association which resulted in a definite recommendation that a Faculty of Dentistry be established and on May 20, 1947, as stated above, power was granted to establish a fellowship in the College, to be known as the Fellowship in Dental Surgery of the Royal College of Surgeons of England (F.D.S.R.C.S. Eng.). Professor R. Bradlaw was named the first Dean of the Faculty. The first Canadian dentist to be honoured by the Fellowship was Dean Roy G. Ellis of Toronto, which was conferred on July 28 of the present year.

The real purpose of the Royal College of Surgeons of England is in relationship to post-graduate qualifications. The Diploma of Fellow in Dental Surgery may be granted to those possessing a dental qualification recognized by the Council of the College. Candidates are required to pass two examinations, namely, the Primary Examination in Anatomy, Physiology and Pathology, and the Final Examination in Surgery, Dental Surgery, and Pathology. The examinations are partly written and partly oral and held in the months of April and October of each year. The applicant is afforded ample opportunity for study in the library and museum of the College.

MONTREAL DENTAL CLUB

The Twenty-Fourth Annual Fall Clinic of the Montreal Dental Club has now passed into history and once again Dr. M. L. Donigan, who has efficiently directed this clinic in the past fourteen years, is to be congratulated upon the outstanding success which attended his efforts. One was impressed not only with the high standard of the program but with the well thought out arrangements and particularly with the fact that all sections of the program were started promptly on time. The able president, Dr. J. W. Abraham, played no small part in this latter accomplishment.

"Fuso-Spirochaetal Disease of the Mouth," "Clinical Photography," "Rheumatic Diseases," "Sulphonamides and Antibiotics" were discussed by outstanding lecturers in these fields. Two hour clinics were given on "Oral Surgery" and "Amalgam Restorations". One hour clinics were given in "Operative Procedures," "Mouth Reconstruction," "Dental Radiographic Examination," "Full Immediate Dentures," "Silicate Cements," "Hydrocolloid in Prosthesis," and Acrylic Resins in Crown and Bridge Procedures. Two of these clinicians are commanders in the Dental Corps of the United States Navy and all the others are men of outstanding reputation. Twenty table clinics were presented on the opening morning of the convention and were well attended.

This year the Progressive Clinic was on that all important subject of "Periodontia for the General Practitioner" and ably presented by Dr. D. P. Mowry, Dean of the Faculty of Dentistry, McGill University, also Dr. W. F. Walford and Dr. P. J. Gitnick both of the Department of Periodontia of this same Faculty.

Those who were fortunate enough to hear Mr. Don Henshaw of the MacLaren's Advertising Agency, Toronto, at the Thursday luncheon came away well repaid for having attended the convention. Many said it was the finest address they had ever heard.

It was a privilege to be able to attend this meeting.

M.H.G.

BOOK REVIEWS

Full Denture Technique, by W. J. Tuckfield, D.D.Sc. (Melb.) Sc.D. (Northwestern), F.A.C.D. Senior Lecturer in Charge of the Department of Prosthesis, Dental School, University of Melbourne. 3rd edition, 267 illustrations, 282 pages. Published by the Australian College of Dentistry, Melbourne, Australia.

The author states that this book is based essentially on notes used by him in his lectures to the students of the Dental School of Melbourne. It is therefore most interesting to one on this continent to observe the thoroughness and efficiency with which the subject of

Prosthetic Dentistry is being taught in our sister Commonwealth of Australia. The fact that the book has gone through three editions in four years indicates the esteem in which it is held there. The author makes no claim that the procedures described are the only suitable ones, but they have been adopted, only after careful examination of methods taught in other schools and as a result of personal clinical experience. The student is led through the basic principles of masticatory mechanism and the laws of articulation to a thorough course in the practical technique of denture construction. The author has spent some time at Northwest-

ern University and the influence of his associations there are clearly shown. In addition to several outstanding Australian names listed in the references there are many with whom we on this continent are very familiar, such as Schlosser, Hanan, Prothero, Clapp, Swinsin, Hall and others and such European names as Fish, Gysi, and Stibbe.

The book is well printed and both the author and the publishers are to be congratulated.

KENNETH M. JOHNSON

Photographic Aids to Clinical Dental Practice, by James M. Dyce, L.D.S. (Glas.), L.R.C.P., L.R.C.S. (Edin.), D.D.S. (Penn.) The Dental Department, Guy's Hospital, University of London. Lately Military Supervisor (Dental) Army Training Films, the War Office, and Officer in charge Photographic Department Royal Army Dental Corps Training Establishment. 199 illustrations with many in colour. 175 pages. Published

by Staples Press Ltd., Cavendish Place, London, W1, also 70 East 45th St., New York. Price 50/-net.

This book is of a practical nature and should be useful for those who have had considerable experience in photography instead of beginners. The first chapters deal with the scope and use of coloured film, black and white films for teaching in colleges and for records in dental practice. There is an excellent chapter in the production of a coloured movie stressing the importance of a film director, a producer, as well as the dental surgeon.

The second part of the book deals with the technical procedures in both still and movie films. The author's long experience enables him to give invaluable information regarding procedure.

The book should be in the libraries of dental colleges. Dentists interested in photographic records in dental practice will find it helpful.

DOUGLAS BROWN

ROYAL CANADIAN DENTAL CORPS NEWS

1. Major B. P. Kearney of the Directorate of Dental Services, Ottawa, and Captain T. M. Walker and Sgt. A. D. Brown, 11 Coy R.C.D.C., Calgary, Alta., having successfully completed the Parachutists' Course were awarded Parachutists' Badges at the Joint Air School, Rivers, Manitoba; Captain Walker and Sgt. Brown at a Wings Parade on 30 August, 1948, and Major Kearney at a Wings Parade on 12 October, 1948. Five jumps from a Dakota aircraft are required to qualify for the Parachute Wings.

2. Captain T. W. Turner, R.C.D.C., with Major J. A. M. Cameron, R.C.A.M.C., accompanied by Sgt. P. R. Jones, R.C.D.C., have recently completed the annual health inspection trip to the District of Mackenzie in the Northwest Territories. Transportation was provided by the R.C.A.F. with F/L. J. B. Lawrence and Cpl. H. Fee as air crew. Dental and medical treatment were provided to all service personnel in isolated areas and a small proportion of Indians and Eskimos. This trip covered an overall distance of 7200 miles. One hundred and fifteen members of the Royal Canadian Corps of Signals, 75 members of the R.C.A.F. and an uncounted number of Indians and Eskimos were given medical and dental attention.

3. The R.C.D.C. is in the process of preparing an official history of the Canadian Dental Corps for the period of the Second World War which is to be incorporated with a similar history of the Royal Canadian Army Medical Corps. This history will comprise a complete chapter dealing chronologically with the development and activities of the C.D.C. and a special chapter dealing with the professional advances in dental surgery.

In view of the significant and varied experiences of individuals which were never officially recorded, it is felt that valuable historical material may be omitted unless brought to the attention of the historian.

A history, written as a chronological arrangement of hard recorded facts, must, of necessity be both incomplete and dull. Therefore former members of the C.D.C. are earnestly requested to submit accounts of any interesting experiences unlikely to have been recorded for inclusion in the official War Diary of the C.D.C.

Please send contributions to: The Director General Dental Services, A.H.Q., Ottawa.

4. Doctor L. G. Craigie of Moose Jaw, Saskatchewan, has been appointed in the rank of Captain to the R.C.D.C. effective 1 November, 1948.

CANADIAN DENTAL ASSOCIATION NEWS

(From the Office of the Secretary)

Saskatchewan Increases Grant

Official notification has been received from the Secretary of the Council of the College of Dental Surgeons of Saskatchewan as follows:

At a meeting of the Council of the College of Dental Surgeons of Saskatchewan, on October 18, 1948, a resolution was passed increasing the grant to the C.D.A. to \$10.00 per member, commencing with the payment of the 1949 grant.

Cooperation of Pharmacists Re Sodium Fluoride

As a result of discussions with representatives of the Canadian Pharmaceutical Association the following statement will appear in the next issue of the Canadian Pharmaceutical Journal:

"Sodium Fluoride For Dental Use

Dr. D. W. Gullett, Secretary of the Canadian Dental Association has requested that pharmacists cooperate with dental practitioners in the experimental use of Sodium Fluoride in preventing dental caries.

Dentists have been directed as to the proper method of applying solutions of Sodium Fluoride. Uniform technique is necessary so that scientists can properly appraise the results of the experiments that are being undertaken across Canada.

The Association asks pharmacists of all provinces to cooperate in this work with particular emphasis on the following points,

1. That only chemically pure or reagent Sodium Fluoride be supplied to the dental practitioner. The common Sodium Fluoride used as a pesticide is not to be used.
2. That a 2% solution of Sodium Fluoride C.P. in sterile, distilled water be used.
3. That the material be supplied to dental practitioners only, and that in view of the poisonous nature of Sodium Fluoride, and of the importance of the findings that are expected, it is suggested that a prescription be required for each order.

Inquiries made at wholesale drug houses in Toronto indicate that the C.P. quality is available in 4 ounce containers at a cost of approximately 78-80 cents each."

Appreciation from Department of Veteran Affairs

The Association has received the following letter of appreciation from Dr. L. A. Kilburn, Director of Dental Services, Department of Veterans' Affairs.

"I should like to take this opportunity to express to you, as Secretary of the Canadian Dental Association, the appreciation of this office for the very fine cooperation which the dentists of Canada have shown in dealing with the dental requirements of our ex-service personnel.

"The rehabilitation program for Canada's ex-service men and women entailed a great amount of dental treatment at a time when the profession was already overworked in supplying normal civilian requirements. How well the dentists of Canada responded to this extra task is borne out by the figures now available. As of 30th September, 1948, on which date new authorizations for ex-defence treatment ceased, 662,826 cases had been authorized to dentists in Canada; on the same date only 3,414 cases remained outstanding.

"Approximately 98% of the profession participated in the provision of treatment to these patients, and of this number only a very, very few have tried to take advantage of the patient and the Department. It is to that great majority that I again wish to say, 'Thank you for your splendid cooperation in dealing with this problem.'

"As it is practically impossible for me to thank each dentist individually, I am sending this letter to you trusting that you may have some means of passing on this message."

Sincerely,

(Signed) LEE

L. A. KILBURN, D.D.S.,
Director of Dental Services.

Submission to Minister of Finance

"Memorandum Re Tax On Dentifrices

Information has been presented to this Association that owing to advanced costs in the manufacture of dentifrices, the price of dentifrices will have to be materially increased. It is pointed out to us that the present high tax which is imposed by the Federal Government

is the important factor in the cost, and further, that an alleviation of this tax would reduce the present charge to the consumer.

It is our desire to present the following points for your consideration:

- (1) Representing a health profession we have no interest in the actual operation of the commercial firms manufacturing dentifrices.
- (2) No matter what our scientific opinion may be in respect to individual dentifrices which are on the market we must admit that the said dentifrices are an important contributory factor to the dental health of the public.
- (3) The price at which dentifrices are sold definitely affects the use of these products for the public have become educated to such an extent that mouth health becomes neglected unless a dentifrice is available.
- (4) We are informed that Canada is the only country which includes dentifrices in the group of toilet preparations for taxation purposes."

The following is an excerpt from the reply received from the Minister on November 18, 1948:

"You may be assured that when I am reviewing excise tax proposals during the preparation of the next Budget this recommendation will be seriously and carefully considered."

Publication of List of Members

In answer to the many inquiries a list of members with addresses will be published December 1949. Owing to increased costs of publication the Executive ruled that no list be published for the year 1948.

Appointment of Directors of Dental Health Services in Saskatchewan and New Brunswick

Dr. A. E. Chegwin has been appointed Director of Dental Health Services for Saskatchewan Government and assumed his new duties on November 1st last.

Dr. R. S. Langstroth has been appointed Director of Dental Health Services for New

Brunswick by the New Brunswick Government.

With the above two appointments four of the provinces now have full time appointees as Directors of Dental Health Services.

The Credit Rating of Dentists

Under the sponsorship of The National Association of Personal Finance Companies the Department of Business Administration of the University of Illinois recently conducted a research investigation into the subject of credit risk of people of the different occupations. A percentage rating based on how good their credit risk is, follows as obtained by this investigation:—

Office employees	92.2
Retail grocers	89.8
Chain store managers	89.2
Other retailers	89.0
School teachers	86.4
Railroad trainmen	85.8
Railroad shopmen	85.2
Retail salespeople	83.2
Dentists	82.2
Doctors	80.4
Nurses	71.2
Farmers (owners)	70.8
Factory workers (men)	70.0
Traveling salesmen	68.8
Filling station employees	63.0
Factory workers (women)	61.0
Lawyers	60.8
Auto mechanics	60.0
Janitors	60.0
Farmers (tenants)	59.2
Brickmasons	59.0
Firemen and policemen	58.2
Railroad trackmen	57.8
Coal Miners	57.6
College students	55.6
Domestic servants	55.2
Carpenters	52.6
Hotel employees	48.2
Auto salesmen	47.0
Common laborers	46.0
Restaurant employees	44.6
Barbers	42.8
Truck and bus drivers	42.6
Painters and decorators	38.2

NEWS FROM THE PROVINCES

BRITISH COLUMBIA

Victoria Dental Society

This Society enjoyed a visit from Professor Gerald Stibbs, of the University of Washington Dental School, at its October meeting. Doctor Stibbs, a former well known practitioner of Vancouver, was prominent in the work of the Ferrier Study Club, and recently accepted the professorship of Operative Dentistry in the University of Washington, in Seattle. He gave a very fine address, illustrated by excellent slides, on "Diagnosis by Means of X-rays."

For its November meeting, the Society had Doctor O. T. Dean, also of Seattle, who spoke on "Oral Surgery." Doctor Dean is an outstanding oral surgeon who has given much attention to cleft palate cases.

The President and Secretary of the Canadian Dental Association were scheduled to address the members at a meeting on November 20.

Fraser Valley Dental Society

The regular meeting of this Society was held at Haney, B.C., on November 18. Doctor John Ryan, of Seattle, who is well and favourably known in the Pacific North-West, was the guest speaker, on the subject of "Operative Dentistry" with particular reference to amalgam restorations.

Vancouver and District Dental Society

Doctor Maury Massler, D.D.S., M.S., Ph.D., of Chicago, who is Professor of Pedodontia, Director of the Child Research Clinic, Professor of Histology and Lecturer in Stomatology in the University of Illinois, addressed meetings of this Society on November 2. Doctor Massler was a welcome visitor, since his reputation as a speaker and teacher is well established in this district. At an afternoon meeting, he spoke on the subject of "Periapical Infections", discussing briefly, also, acute and chronic osteomyelitis, and the cause, dangers and treatment of the so-called "dry socket." At the evening meeting, following dinner, Doctor Massler dealt very thoroughly with the question of fluorine prophylaxis. He deplored the undesirable publicity that fluorine treatment has received from inadequately in-

formed press writers, and stressed the need for intelligent authoritative information on the subject, based on all the known facts. His summing up of the question was as follows:

Systemic administration of fluorides in the form of tablets or bone meal is useless and unscientific, and that its topical use by means of mouth washes, troches, and tooth pastes is equally ineffective.

The topical application of the solution in the prescribed manner has been proven to be effective in a sufficiently high percentage of cases to justify its use.

Its effectiveness is due to its assimilation by the enamel cuticle, and that, therefore, the teeth must not be violently scoured with pumice during the preliminary prophylaxis, to the extent that the cuticle may be destroyed.

It is ineffective when applied to mature teeth, because the enamel cuticle is impervious.

It most definitely should not be applied to exposed dentine. All restorative work should be completed before the application of the solution.

A group of about twenty-five members of the Society, organized by Doctor Gerry Plant, enjoyed an extremely profitable lecture course on Saturday and Sunday, on such subjects as "The Common Cold"; "Oral Lesions"; "Hidden Sugars"; "Caries Control"; "The Fluorides"; and "Penicillin and the Sulpha Drugs," given by Doctor Massler.

A class of twelve men attended a clinic in gold foil work, during the month of November. Instruction was given by Doctors Ellsperman, of Bellingham, Washington, and Walter Sproule, of Vancouver.

L. G. R.

ALBERTA

Calgary Dental Society

The first fall dinner meeting of this Society was held October 18 in the Palliser Hotel.

Dr. Henry Freeland, President of the Dominion Dental Council of Canada, was the speaker on this occasion. In a comprehensive and enlightening talk Dr. Freeland outlined the history, and the function of the Dominion Dental Council, and explained the problems confronting it and the efforts being made to overcome these problems.

Dr. Freeland also reported on the convention of the Canadian Dental Association held

at Murray Bay and praised the hospitality and sincerity of our Quebec confrères.

Edmonton and District Dental Society

Over sixty members of this Society attended the first of their fall and winter meetings held at the MacDonald Hotel.

The guest speaker for the evening was Dr. E. H. Watts; his topic being "Some Newer Aspects in Anaesthetics."

A series of five, well attended, golf meets was held at monthly intervals during the summer and fall.

Over fifty members of this Society attended the monthly dinner meeting at the MacDonald Hotel on November 2.

Medical and surgical treatment of peptic ulcers and the various advantages and methods in each case, were outlined to members by Dr. P. H. Sprague, Associate Professor of Medicine at the University and Dr. W. S. Anderson, Chief Surgeon for the Royal Alexandra Hospital.

A feature of the evening, was the presentation of the Society's annual scholarship award to Thomas Demco, second year student. This was on his outstanding achievement during his first year course.

At a recent meeting of the Edmonton Dental Society, the following members were elected for the year 1948-49:

<i>President</i>	Dr. G. E. Decker
<i>Vice-President</i>	Dr. H. M. Knight
<i>Sec.-Treasurer</i>	Dr. D. F. McIntyre
<i>Sec.-Convener</i>	Dr. Wm. Orobko
<i>Directors</i> :—	Dr. R. A. McCormack; Dr. A. J. O'Neill; Dr. P. J. Kendal.

Edmonton Dental Nurses' Association

On September 11, 1948, this association had its first meeting of the new year and the following officers were elected:

<i>President</i>	Jean Rogers
<i>Vice-President</i>	Margaret Clarke
<i>Secretary</i>	Jean Campbell
<i>Treasurer</i>	Madge Crowell

On October 22 the dental assistants of Edmonton put on their yearly dance at the Trocadero Ball Room. There were over 300 people attending this dance and many of the Edmonton and district dentists were in attendance. It was an exceptional occurrence. W.E.A.

SASKATCHEWAN

The College of Dental Surgeons of Saskatchewan

The annual meeting of this body was held in Saskatoon on October 18, 1948.

Dr. M. J. MacDonnell was elected President and Dr. W. M. Blair as Vice-President. Dr. L. J. D. Fasken was elected as Secretary-Treasurer and Registrar.

Dr. W. F. Hancock of Fort Qu'Appelle and Dr. J. P. Whyte of Swift Current, who were recently elected to the council, attended their first meeting.

Dr. A. E. Chegwin, who resigned as a member of the Council to assume his new duties as Director of Dental Services for Saskatchewan, attended his last meeting.

Dr. K. C. Wasson of North Battleford was appointed by the Council to fill the unexpired term of Dr. Chegwin.

The Council voted to increase the annual grant per member to the Canadian Dental Association from \$8.00 to \$10.00 a year commencing in 1949.

The Council met with the Dental Board of Examiners of which Dr. J. S. Thompson, President of the University is Chairman, and Mr. A. Weir is Secretary. The work of the committee was reviewed in detail and much good was derived from the meeting. L.H.

Honour to Dr. L. J. D. Fasken

On the 18th day of October 1948, the College of Dental Surgeons of Saskatchewan unanimously adopted the following resolution:

"WHEREAS Dr. Lorne J. D. Fasken has, over a long period of years made an outstanding contribution to the Dental profession, particularly as Secretary-Treasurer and Registrar of the College of Dental Surgeons of Saskatchewan; and whereas Dr. Fasken has long been associated with the activities of the Western Canada Dental Association and is at present serving as President of that association; therefore be it resolved that the Council confer on Dr. Fasken an honorary life membership in the College of Dental Surgeons of Saskatchewan."

Dr. Fasken was graduated from the Royal College of Dental Surgeons of Ontario in 1905 and immediately went to Regina, Saskatchewan, where he opened an office and has remained ever since. In 1907, he was elected

as a member of the Saskatchewan College of Dental Surgeons. At his attendance of his first meeting, he was elected Secretary-Treasurer, which position he has held continuously. In 1932 he was made permanent Secretary-Treasurer at the pleasure of the Council.

Dr. Fasken was born on a farm near Guelph, Ontario; of Scottish parents and has one son and one daughter. We all wish to join in extending congratulations to Dr. Fasken upon this honor conferred upon him, to extend our appreciation of his excellent contribution to the Dental association and to extend the hope that he will continue to serve for many more years.

MANITOBA

Winnipeg Dental Nurses' and Assistants' Association

This Association was most fortunate in having as guest speaker, Oct. 15, Miss Grace Dalmadge, Canada's only representative to UNESCO seminar held in Prague this past summer. Her subject was "It is the Duty of Every Adult to Teach Children to be World Minded."

Dr. Wallace Grant was the guest speaker Nov. 8. He gave a vivid picture of the "Care of Sick Children, Teaching, Research, and Preventive Function of the Children's Hospital."

ONTARIO

Toronto Academy of Dentistry

NATIONAL HEALTH SERVICES ACT OF GREAT BRITAIN

The first stated meeting of this association was held on November 11 with a splendid attendance. Dr. D. W. Gullett was guest speaker and he gave a fine presentation of his observations relating to the National Health Services Act of England. The address was thought provoking and well received. Naturally the discussion was mainly on the dental aspects of the act and from the Canadian dentists point of view. The speaker stated that many fine features were embodied in the Act which was a result of much study and constructive thinking but regretted it was necessary for the regimentation of professional personnel to the extent that has been done.

The speaker pointed out at the outset that a social revolution without bloodshed is in progress in Great Britain—that Britain is a social laboratory for the world and that the

eyes of the Nations are watching the progress. He believed that this new National Health program would have come irrespective of which political party was in power because all agree that necessity existed for new arrangements in order that modern health services could become available to all the population.

"The National Health Services Act came into force on July 5, 1948. It is a most comprehensive piece of legislation and of great magnitude," said the speaker. Participation in the health program is compulsory in that everyone contributes. It is optional whether the individual accepts the benefits and optional whether the dentist participates in the scheme. The original plan was to introduce the program gradually but because of the war and conditions following it, it was introduced in *toto* on the given date. In the first week of operation there were 50,000 applications for services and naturally the professions have inadequate personnel to deal with the situation properly.

The professional groups in Britain are not opposed to the principle of health insurance; they do object to being regimented and having their clinical freedom curtailed, to being started on a path which would lead them to civil service status and in general to any destruction of individualism. Sir Lionel Whitley, president of the British Medical Association, is quoted as expressing a prevalent professional attitude when he made this comment: "By looking back into history I hope I have made it abundantly clear that individualism has done so much in the past that were it extinguished either by the state or easy living, by regulated hours or too much insistence on plans or planning, then Medicine in the future will never reach the same heights of achievement." The obvious inference is that professional advancement is paramount and that while its expression in terms of service is increasingly both desirable and necessary yet the proven incentive to the first should not be lost in the promotion of the latter.

Dr. Gullett explained how regulations in great number were set up in detail to cover practically every eventuality. He explained the system of records to be completed every time a patient presented himself for treatment and described them as burdensome, time consuming and requiring much patience. He suggested the administration of the scheme to be very complicated and illustrated how fast the ad-

ministrative staff had already pyramided. Furthermore it was his opinion that the Minister of Health had become actually the dictator of health services.

As previously pointed out the dentist in Britain has the option of participating in the scheme or remaining outside and continuing private practice. About 50 per cent have agreed to co-operate in providing the dental benefits and it seems that for one reason or another others must follow as time goes on. Dentists in the service may practise in their own surgeries or in the government operated health centres; the first group which is the larger at present are paid according to a set fee schedule while the latter are on a salary basis. It was intimated by the speaker that officials of the government state that eventually all dental services will be performed in "Health Centres" by salaried dentists. According to the salary schedule the minimum salary for full time in Canadian funds is \$2,300.00 per annum; this may be increased by an annual increment of from \$100 to \$200 per year depending upon certain conditions until a possible \$8,000.00 is attained. It was suggested by the speaker that it could be a long time before the dentist arrived at the \$8,000.00 salary bracket, if ever.

Although critical of the act in many respects as it affected the dental profession the speaker pointed out a number of constructive features: It encouraged conservative dental treatment such as fillings, prophylaxis, etc., by allowing good compensation in the fee schedule (prosthetic restorative services were not so favored); It provided for refresher courses, free of charge, with some compensation for the time spent; It provided that the dentist could accept or refuse any patient thus allowing him to build a clientele to his own liking; it provided for test checks upon every dentist's work which would encourage services of quality rather than quantity; it provided for retirement at age 65 with an annuity the amount of which depended upon the principal sum built up over the years by deducting 6 per cent from all salaries or fees payable to the individual during his active years of service.

It was the opinion of the speaker that while these benefits were good, the price to be paid was too high for at least two reasons:

1. Dentists as a profession and as individuals were being asked to give up their freedom of practice for the promise of security.
2. That

the standard of dental health would deteriorate rather than improve because (a) experience has shown that when treatment is thrown wide open to all age groups the most important group from the preventive standpoint becomes the loser and (b) a program of health education, considered by leaders in the field of health as a prerequisite to health services, has not been promoted.

In concluding his remarks Dr. Gullett made a very earnest plea to his colleagues in the audience and through them to the dentists of Canada to awaken to the trend of the times—greater socialization of health services. The profession of dentistry must do its part in promoting better dental health but restrain to the utmost whatever plans might interfere with progressive achievement towards the goal of an improved dental health service. To do this we need a united profession with a common purpose and a will to support their leaders as they seek to co-operate with our governments that Canadians may enjoy good dental health.

T. R. M.

The Dental Nurses' Alumnae Association of Canada

The October meeting of the Alumnae was held at the I.O.D. Headquarters on Lowther Ave., with the president, Miss Marion Barton, in the chair.

The members made dressings for the Cancer Clinic under the direction of the convener, Mrs. Joe Keene.

The 4T8 graduates headed by their president, Miss Betty Milne, initiated the student nurses and later joined the Alumnae members for refreshments.

Toronto Study Club Dental Technicians

On October 16 this Society held its regular monthly meeting at the Royal York Hotel with a good number of members present.

Mr. Hans Smith, a well known dental technician from Montreal, was the guest speaker, giving a demonstration on "Partial Gold Denture Construction by the Lift Up Wax Pattern Technique." The wax pattern was prepared on the master model then lifted off and invested: the resulting gold casting fitted perfectly. The evening was both enjoyable and profitable.

President Mr. Tebutt presented the thanks of the club to Mr. Smith for a fine presentation.

Hamilton Dental Association

This very active dental society began its season's program on October 13. Dr. D. W. Gullett, Secretary of the Canadian Dental Association, was the guest speaker. His address was entitled "My Recent Trip to England and Observations on the New British Health Services Act."

On November 17, Dr. O. S. Clappison of Toronto presented a lecture clinic entitled, "Crown and Bridge Prosthesis."

December 8 was the Association's clinic day featuring:—

Dr. W. D. Clark	Prosthetics
Dr. Wm. Foster	Orthodontics
Dr. Wm. McEwen	Orthodontics
Dr. Donald Moore	Periodontia
Dr. Peter Smylski	Surgery
Dr. Carl Moyle	Surgery

Following this afternoon clinic program the usual pre-Christmas party was held with the usual good time for all.

The program for the New Year is as follows:

January 20, 6.30 p.m.

Dr. Don Bellinger, Surgeon-in-chief Henry Ford Hospital, Detroit. Subject:—Oral Mucous Membranous Lesions.

February 16, 6.30 p.m.

Dr. Wallace McNichol, M.S., F.A.C.S., (Tor.). Subject:—Plastic Reconstructive Surgery.

March 16, 6.30 p.m.

Dr. Herbert Kohrman, Danbury, Connecticut. Subject:—Complete Denture Prosthesis.

April 7, 6.30 p.m.

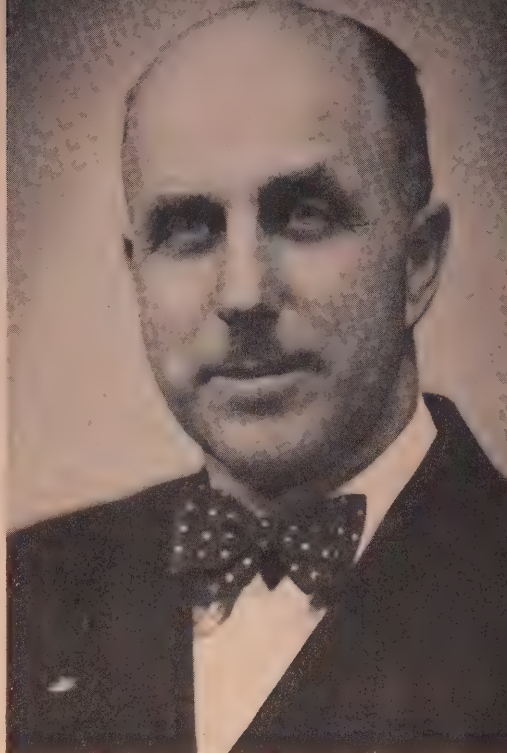
This is the final meeting of the year when a good fellowship program is a special feature. Dr. Grant Countryman is president of this Association.

NOVA SCOTIA

Halifax Dental Society

The first regular meeting of this Society, was held in the Nova Scotian Hotel on October 7.

The president expressed his regrets at the passing of Dr. Ritchie, during the interval since the last meeting. The Society mourned his death by the observance of one minute's silence.



DR. J. GRANT COUNTRYMAN
President Hamilton Dental Association

Dr. Oxner was called upon to present Dr. Beckwith with a token of the members' esteem and the congratulations of the Society on his recent marriage.

Dr. Beckwith acknowledged the sterling thermos and tray and expressed his regret that his retirement would interfere with his associations that he held in such regard.

The new slate of officers for the year 1948-1949 season were installed.

<i>President</i>	Dr. P. Christie
<i>Vice-President</i>	Dr. J. P. McGuigan
<i>Secretary</i>	Dr. J. E. Merritt
<i>Executive</i>	Dr. H. S. Crosby

Dr. Croft introduced his associate Dr. Brendan McNeil, and welcomed him to the Society. Dr. McNeil is a recent graduate of Dalhousie.

Coloured films taken at Murray Bay at the National Convention were shown by Dr. McGuigan, who identified the many friends made and renewed at that idyllic spot. w.c.o.

NEW BRUNSWICK

New Brunswick Dental Society

The fifty-third Annual Convention of the N. B. Dental Society was a very successful meeting. It was held September 20-21 in the Admiral Beatty Hotel in Saint John. The convention was opened by a few well chosen remarks of Mayor James D. McKenna of Saint John and ably replied to by the president Dr. Theo Godin of Campbellton.

Several important decisions were made at the annual business meeting:

1. The per capita fee to the C.D.A. was raised to \$10.00.

2. It was decided that next year a Maritime Dental Convention will be held at the instigation of the Nova Scotia Dental Society. The convention will be at the spacious C.P.R. summer hotel at Saint Andrew's the first week of September, when the New Brunswick Dental Society will be host to Nova Scotia and P.E.I.

3. Cooperation was promised by the Society to the new Director of Dental Services for New Brunswick, Dr. R. S. Langstroth.

Congratulations were extended to Dr. Kirkpatrick of Grand Falls for fifty years of practice and to Dr. F. C. Bonnell for completing thirty-three years on the N.B. dental examining board. Five new members were welcomed to the Society: Dr. Leo Cormier, Dr. J. M. Earle, Dr. R. D. Ogilvie, Dr. D. C. Steeves and Dr. A. Steurman.

Dr. Raymond J. Nagle, internationally known prosthodontist of Boston and a graduate of Harvard gave a very interesting and highly instructive paper on local and systemic conditions to be noted in full denture prosthesis.

Dr. Hugh Eaton, professor of radiology at Dalhousie, gave a very interesting lecture illustrated with slides on x-ray techniques.

Dr. James P. McGuigan of Halifax gave an instructive talk with coloured moving pictures on children's dentistry. He stressed the urgent need for better child psychology on the part of dentists.

At a luncheon meeting held at the Riverside Golf and Country Club, Dr. A. J. Cormier, on behalf of the Society, presented to Dr. F. C. Bonnell a leather Gladstone bag for Dr. Bon-

DENTAL SOCIETY OFFICERS

Officers elected for the coming year by the New Brunswick Dental Society at the annual convention which opened in Saint John Sept. 20 are shown below. From left to right they are: Dr. E. R. McClintock, Centreville, Vice-President; Dr. Theo Godin, Campbellton, Past-President; Dr. L. R. Allanach, Moncton, President and Dr. S. K. Wetmore, Saint John, Secretary.



nell's faithful and untiring efforts on the examining board.

At a dinner held in the ball room of the Admiral Beatty, Dr. Stanley Bagnell, Dean of Dalhousie University Dental School, gave a very interesting address. Dr. Bagnell stressed the need for increased research in the profession in line with a growing public interest in dental health.

The officers elected for the ensuing year were as follows:

Pres. Dr. F. L. Allanach, Moncton
Vice-Pres., Dr. R. E. McClintock, Centreville
Sec.-Treas. Dr. S. K. Wetmore, Saint John
Councillors: Dr. J. P. Dowd, Moncton; Dr. R. H. Bingham, Moncton; Dr. S. Comeau, Moncton; Dr. B. R. Ross, Fredericton; Dr. F. L. Miller, Fredericton; Dr. J. B. Sutherland, Woodstock; Dr. D. A. Somerville, Bristol; Dr. K. G. Williamson, Saint Stephen; Dr. J. B. O'Brien, Saint John; Dr. S. K. Cougle, Saint John; Dr. J. F. Edgecombe, Saint John; Dr. F. C. Simms, Edmundston; Dr. G. G. MacDougal, Sussex; Dr. G. R. Corbosiero, Chatham.

QUEBEC

Montreal Dental Nurses' and Assistants' Association

The 13th Annual Convention of this Association took place at the Mount Royal Hotel Oct. 27-29 in conjunction with the Montreal Dental Club Fall Clinic.

The official opening of the convention took place on Thursday morning with the President, Miss Joan Green, giving an address of welcome to the out of town members and

guests. Greetings were brought to the Association by Dr. D. Prescott Mowry, Dean of the Faculty of Dentistry, McGill University; Dr. Ernest Charron, Dean of the Faculty of Dentistry, University of Montreal; Dr. J. W. Abraham, President of the Montreal Dental Club.

Speakers during the three day convention were the following: Dr. E. J. McCracken, Dr. Cameron T. Walsh, Montreal, Que.; Dr. R. E. Lussier, Montreal, Que.; Dr. H. A. Hartman, Cleveland, Ohio; Dr. F. D. Derrick, London, Eng.

Table clinics were given by the following members of the Association:

Miss Lois Winters:—
 "Cements and Silicates"
Miss Florence Limoges:—
 "Favours for Children"
Miss Frances Wiseman:—
 "Haemophilia"
Miss Mildred Rosenberg:—
 "Practical Hints"

The following officers were elected to the executive for the year 1948-49:

Pres. Miss M. Good
Vice-Pres. Miss Pat Doyle
2nd Vice-Pres. Miss E. Derick
Treasurer Miss J. Green
Rec. Sec. Miss Lois Winters
Cor. Sec. Miss O. Goodenough
Archivist Miss A. Ratner
Editor Miss M. Rosenberg

At a regular monthly meeting of the Association held on Nov. 8 in the Mount Royal Hotel, the guest speaker was Miss Thelma Palmer of Bristol Myers Co., who gave a most interesting talk on "Grooming for the Job" to the large number of members present.

MILDRED STARR

EMPIRE NEWS

GREAT BRITAIN

Dental Treatments Under British National Health Service

Dental treatments being provided by the British National Health Service are costing more than seven times the amount the government originally planned to spend for dentistry, according to a report of the London correspondent of the *Journal of the American Medical Association*. In the Oct. 9 issue, J.A.M.A.'s London correspondent quoted the secretary of the British Dental Association as reporting

that dental services under the government plan are costing more than \$600,000 a day compared with the government estimate of \$28,000,000 for a full year. The average cost of treatment cases is estimated at \$20. The London correspondent continued: "This staggering increase of cost of the dental service is, of course, due to the offer of 'something for nothing' which characterizes socialistic schemes. Everyone who can possibly do so wants to share in the spoils. It might be rejoined that the service is really not free, as

the beneficiaries pay their weekly contributions, but their payments amount to only part of the cost, the rest being made up by the state. In any case, the motive to share in the distribution remains exactly as if no contributions were made . . ." *A.D.A. News*.

Improper Medical Practices

The British Medical Association has examined the question of "improper practices" alleged in Parliament by a socialist member, because some doctors refused to take certain patients on their lists for the National Health Service. The Association finds that the service has started smoothly in most districts. Nevertheless, difficulties are being met with, as is inevitable with such a vast piece of social legislation. These should be neither exaggerated nor glossed over. It would be unfair to put blame on doctors for misunderstandings which are not of their making, and still more unfair to charge the entire medical profession with incorrect behaviour which involves only a small minority. The British Medical Association has laid down the following points:

(1) The basis of family medical practice is free choice, which works both ways. No doctor should be forced to take any particular patient, just as no person should be forced to have any particular doctor. Neither of them need give any reason for refusal. (2) The service is open to all irrespective of income. The association is confident that the profession in general would strongly deprecate the refusal of any doctor to accept a person as a National Health Service patient on financial grounds. The decision whether to be a public or private patient must be a matter for the individual. (3) Every doctor has a right to set a limit to the number of patients he is prepared to accept on his list. Within the service all receive equal treatment according to

their medical needs. It is impossible for the doctor—or indeed for the government or the administration—to give any public patient advantages or privileges not enjoyed by others. It must never be overlooked that there is a grave shortage of doctors and facilities. (4) The Association is confident that the profession will feel strongly that, although a doctor is fully entitled to decline work for which he has no special aptitude, it would be entirely wrong for him to discriminate against particular classes; *e.g.*, to refuse to accept as patient's children or old persons on the ground that they involve too much work. This is regarded as contrary to the standards of medical practice. It might have been added that some of the dissatisfaction expressed at the inauguration of the service is due to the exaggeration of its advantages and the ignoring of its drawbacks by the socialists, in the usual manner of politicians.—*J. of the American Medical Association*, 138:145, September 11, 1948—per Public Health Economics.

Nurses Demand Increased Pay in London

Disregarding matrons' protests that their action was undignified about 1,000 nurses from hospitals in London and southern counties demonstrated in London's Hyde Park August 15, demanding higher pay. Most had come from night duty and spent their rest hours in uniform parading through crowded streets into the park.

Although the staffs of most hospitals are desperately short, pay rates for nurses are very low compared with industrial wages. Most nurses get about 1s. 5d., or about 28 cents, an hour. A London charwoman's pay is about 60 cents an hour.—*New York Times*, 98:4, August 17, 1948—per Public Health Economics.

GENERAL NEWS

Fédération Dentaire Internationale Annual Session, 1948

The Fédération Dentaire Internationale held its annual session in Dublin (Eire) from August 3 to 9, 1948.

After six years of total inactivity, our professional organization began its "Resurrection" by holding smaller sessions in 1945 and 1946 in Paris and Brussels. During these reunions,

it was decided to make important changes both to the statutes and to the administration of the Fédération. However, our constitutional charter demands that our reforms be only made during General Assemblies, which take place at an International Congress.

In order to be in conformity with this rule and owing to the impossibility of organizing without delay, a Congress in Europe the Bu-

reau had obtained from the American Dental Association an agreement that it would consider its 1947 Annual Meeting as an official F.D.I. Congress. The General Assemblies held during this period, allowed the Fédération's Bureau to submit to the delegates from affiliated countries present at the Boston Congress, the projects which had been established and obtain their approval of the same.

The formalities for the reconstitution having thus been achieved, the 1947-48 period can be considered as the first year during which the activities were completely resumed and the Dublin session was the first Annual Meeting held since the War under conditions which would be considered as the revival of the Fédération's wonderful work. This session, therefore, was very important.

We should like to mention that, the highest ranking authorities in Eire personally expressed their interest in our profession. The Official Opening of the Session was presided over by the Assistant Prime Minister, Mr. Norton, whilst the Prime Minister himself, Mr. Costello, honoured us by being present at the F.D.I.'s banquet. A magnificent reception given by the President of Eire was the centre of attraction of these various entertainments.

The activities of the Session were marked by reunions of the Executive Council, of the Commissions and by two scientific meetings. The latter are an innovation, and were a great success, consequently the Bureau decided to admit them on the program of future sessions.

The meetings held during the Dublin session dealt with two problems of interest at the present moment: The organization of "Dental Care for the Masses" and the "Incidence of Dental Caries owing to the War in the European Occupied Territories."

The following Commissions have resumed their activities: The Commission on Hygiene (President: Dr. A. E. Rowlett). Education (President: Prof. R. Bradlaw). Scientific Research (President: Dr. B. Orban, represented during the session by the Vice-President: Dr. W. Stewart-Ross). Public Dental Services (President: Dr. S. Kelsey Fry). Terminology (President: E. Haderup). Legislation (President: A. Joachim). Publications (President: Dr. H. Hillenbrand, represented at the session by the Vice-President: Dr. G. Leatherman).

Among the most important decisions made was that of publishing an "International Dental Journal."

It must not be overlooked that, the principal aim of the F.D.I., the foremost interest in its program, is the organization of the great quinquennial congresses. The next one is to be held in London in 1952 under the presidency of Dr. W. Fish (Great Britain). Its organizing Committee was formed and began work several months ago.

It is indeed worth pointing out, that in spite of the extreme difficulty encountered nowadays in travelling, fourteen countries were represented: Argentine, Belgium, Canada, Czechoslovakia, Denmark, Eire, Finland, France, Great Britain, Holland, Norway, Sweden, Switzerland, and the United States of America. Various other delegations, which had intended going to Dublin, were unable to do so owing to the fact that they did not obtain the necessary visas.

The predominant impression of this Session is that at last the period of transition, in which the Fédération had found itself after its six years of lethargy and the resumption of its complete activities, has come to an end. Without wishing to underestimate the difficulties which lie ahead nor the obstacles which persist owing to economical and political circumstances, we can truly consider that Dublin was the meeting place of an important number of men sufficiently willing, and this allows us to look upon the future with confidence.

In closing we would stress the urgency of the payment of subscriptions both by national societies as well as by individual members.

DR. M. F. WATRY, Brussels,

General Secretary, F.D.I.

Cost of Social Insurance

There is increasing recognition of the fact that comprehensive plans of social security cannot be successful unless, first, the production of goods, and services is kept at a high level and, secondly, monetary and fiscal policy is so designed as to preserve the value of money. This is a big task and one which it has not yet been shown can, under modern conditions, be done successfully.

"To maintain soundness, it is important that the people should realize that social security benefits are paid for by themselves and not by some other impersonal being called the state. Such benefits merely redistribute the fruits of production, and consequently, it seems that their entire cost should be financed by specific contributions, the state acting only

as administrator and referee. This is especially so if the whole population is to be brought within the scope of social security."—James Hunter in *Eastern Underwriter*, 49:13, August 13, 1948—per Public Health Economics.

Physicians' Income in U.S.A.

In a Survey conducted by *Medical Economics* it was found that the average gross income from fees for independent physicians was \$18,149, the average expenses as a percentage of gross 39.7. The average independent physician in the highest tenth grosses five times more than the average in the lower half. About one out of every eight doctors in independent practice grosses more than \$30,000 and only about two out of every 50 gross less than \$3,500.

Average expenses last year climbed to twice what they were before the stock market break of 1929 and three times what they were during the depression.

New U.S.A. Army Dental Corps Regulations Placed in Effect Sept. 27

Revised regulations for the Army Dental Corps which direct that each major command and military installation shall have a dental surgeon directly responsible to the commanding officer rather than to the senior medical officer were announced by Gen. Omar Bradley, chief of staff, effective as of Sept. 27. The new regulations, representing a major departure from previously existing regulations, also provide that dental surgeons shall have staff status and that enlisted dental personnel shall be organized in their own units.

Corrected List of Dominion Dental Council Officers

President:—

Dr. H. L. Freeland Calgary, Alta.

1st Vice-President:—

Dr. F. C. Bonnell Saint John, N.B.

2nd Vice-President:—

Dr. W. C. Oxner Halifax, N.S.

Sec. Treas.:—

Dr. A. J. Brett Regina, Sask.

*Representatives on Council:—*Dr. G. H. Campbell, Orangeville, Ont.; Dr. Heath McIntyre, Charlottetown, P.E.I.; Dr. A. E. Proctor, Winnipeg, Man.

Dentists and Medics Among Displaced Persons Arriving in U.S.A. from Europe

Two women dentists and at least 2 dental technicians were among the first 813 displaced persons who have arrived in the United States from Europe under the government's program to admit 200,000 displaced persons during the next two years. In all, the first arrivals included 18 persons who are members of the health professions. Each of the first arrivals has been sponsored by religious and welfare organizations which have promised to provide assistance in securing work in the United States. Recent figures reported from Europe reveal that among displaced persons in Germany, Italy and Austria there are approximately 750 dentists, 1,600 physicians, 700 pharmacists, 2,600 nurses, 350 dental technicians and mechanics, 85 laboratory technicians, 300 physical therapists and 60 x-ray technicians.—A.D.A. News.

IN MEMORIAM

Marion A. Fallis, of Toronto, Ontario, aged 68, died October 12. He was graduated from the Royal College of Dental Surgeons of Ontario in 1903. On graduation he practised for seven years in Bobcaygeon before moving to Toronto.

He was a member of the United Church.

Dr. Fallis is survived by his widow.

John King, of Delhi, Ontario, aged 52, died November 8. He was graduated from the

Faculty of Dentistry, University of Toronto and practised in Delhi for the past sixteen years.

He was a member of the United Church, a Charter member of Elmira Masonic Lodge, member of Delhi Legion and Delhi Kinsmen Club. For seven years he was a member of Delhi Council. He was also a veteran of World War I.

Dr. King is survived by his widow, one son, two daughters, his mother and three brothers.

Le Journal

DE L'ASSOCIATION DENTAIRE CANADIENNE

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Le Trichloréthylène en Chirurgie Dentaire*

par MOISE CLERMONT, M.D., F.I.C.A., R.C.P. (crt).

Chef du service d'Anesthésie à l'hôpital de la Miséricorde, Anesthésiste-en-chef de la Faculté de Chirurgie dentaire de l'Université de Montréal.

En 1934, à l'occasion du 14^e Congrès de l'Association des Médecins de Langue Française de l'Amérique du Nord, j'avais le privilège de vous présenter un nouvel anesthésique gazeux, le cyclopropane.

Aujourd'hui, je voudrais vous parler du trichloréthylène, qui, je crois, rendra de grands services, tant en chirurgie générale qu'en chirurgie dentaire. Cet anesthésique a été beaucoup employé en Angleterre ces dernières années. Il n'est pas encore bien populaire ici, ni aux États-Unis, probablement parce qu'il est peu connu.

Formule chimique et propriétés physiques

Le trichloréthylène est un liquide incolore, non-inflammable, dont le point d'ébullition est de 88 degrés (Centigrade). Son odeur ressemble à celle du chloroforme. Il est moins volatile que l'éther, le vinéthène et le chlorure d'éthyle. D'une densité supérieure à l'eau, il ne s'y mêle que difficilement; la lumière et la chaleur le décompose rapidement en produits acides. Sa grande marge de sécurité et sa faible toxicité ont été démontrées par les rapports de plusieurs laboratoires.

C'est un hydro-carbone ($\text{CHCl}_2 - \text{CCl}_2$) auquel il manque une molécule de chlore.

Historique

Le trichloréthylène a été introduit comme anesthésique d'une façon quelque peu inusitée. En 1939, le secrétaire du Comité conjoint sur les anesthésiques du Medical Research Council et de la Royal Society of Medicine, était approché par un chimiste du nom de Chalmers, qui prétendait que le trichloréthylène semblait être un excellent anesthésique et suggérait son emploi par les anesthésistes, donnant les résultats d'expérimentations personnelles du trichloréthylène sur lui-même.

En examinant la question, le Comité a trouvé que le seul travail publié à date sur l'usage du trichloréthylène, comme anesthésique sur l'homme, était celui de Stricker, Golblatt, Warm et Jacson aux États-Unis, décrivant une série de 300 cas d'anesthésies courtes pour opérations mineures. Les résultats n'étaient pas bien convaincants, puisque l'année suivante, le Concile on Pharmacy and Chemistry of the American Medical Association considérait que "le cas n'avait pas démontré suffisamment l'utilité du trichloréthylène".

Dans ces circonstances, on a convenu de pousser plus loin les recherches sur les

*Communication présentée au 19^e Congrès de l'Association des Médecins de Langue Française de l'Amérique du Nord, à Ottawa, le 8 Septembre 1948.

effets possibles du trichloréthylène afin de voir si ce dernier aurait une place dans le champ de l'anesthésie.

Le docteur C. L. Hewer entreprit ces recherches dans le département d'anesthésie du St. Bartholomew's Hospital, en Angleterre. Et les résultats ont été publiés subséquemment dans trois communications, qui ont fait époque dans les annales de l'Anesthésie.

Depuis ce temps, l'usage de cet anesthésique s'est répandu rapidement, et on reconnaît généralement maintenant, qu'il a une place définie en Anesthésie, malgré certains désavantages. De nombreux auteurs en ont décrit les avantages et les inconvénients, tout comme ses applications à la chirurgie mineure et à la chirurgie majeure. (Hewer 1941-42-43-46; Marrett 1942; Galley 1943-45; Marnes 1944; Endesby 1944; Brittain 1948; etc.)

Usage cliniques

Le trichloréthylène s'est révélé un excellent anesthésique par inhalation. Donné goutte-à-goutte, il est très utile pour produire une anesthésie générale légère. On le donne de préférence avec le protoxide d'azote. C'est essentiellement un anesthésique qui rend les autres anesthésiques plus efficaces. On l'a préconisé et employé d'abord comme analgésique, dans le traitement de certaines névralgies, comme le tic douloureux; en oto-rhino-laryngologie pour anesthésier les muqueuses nasales et même dans le rhume des foins; en ophtalmologie, l'inhalation de trichloréthylène soulage certaines affections douloureuses de la cornée, l'iritis, le blépharospasme, etc. On l'a préconisé dernièrement dans le traitement de la crise angineuse. Des recherches pharmacologiques ont démontré que le trichloréthylène n'a aucune influence sur la circulation coronarienne, mais que l'amélioration clinique observée est due plutôt à une action analgésique. En obstétrique, on a découvert en plus une propriété très intéressante du trichloréthylène: dans plus de 20% des cas, on a constaté qu'on obtenait une amnésie complète.

N'étant pas explosif, on peut s'en ser-

vir en présence de cautère. Il est relativement peu irritant, et semble rapidement déprimer les réflexes laryngés et pharyngés. Les nausées et les vomissements surviennent rarement et le réveil est rapide.

Le trichloréthylène ne doit pas être employé cependant pour produire une anesthésie profonde et de longue durée. Certains cas de nécrose aigue du foie ont été rapportés. On ne doit pas l'employer non plus en présence de chaux sodique en circuit-fermé, parce qu'il se produit alors du dichloracéthylène, qui est toxique, et auquel Hewer a attribué certaines névrites crâniennes rapportées avoir causé des paralysies.

LE TRICHLORETHYLENE EN CHIRURGIE DENTAIRE.

a—comme analgésique

Le trichloréthylène ayant été employé d'abord pour soulager certaines névralgies, il était naturel qu'on l'employa comme analgésique dentaire. Car personne de nos jours ne s'assoit dans un fauteuil dentaire sans recevoir une forme quelconque d'anesthésie, même les "Christian Scientists". Employé comme analgésique, il est dénué de tout danger et non-toxique. Rapide à produire l'analgésie, ses effets s'en vont rapidement. L'inhalation en est plaisante, et il ne se produit aucun effet irritant local ou général. Le patient ressent une diminution de tension nerveuse, une sensation de bien-être, d'euphorie et de relâchement, qui peut être accompagnée quelquefois d'une sensation de fourmillement dans les jambes. Et on peut dire avec raison qu'en se servant de cet analgésique, on épargne un temps précieux.

L'administration du trichloréthylène ne requiert pas d'appareil spécial, et le patient n'a pas besoin d'être à jeun pour l'analgésie. On met 1 cc environ de trichloréthylène sur un peu de gaze chirurgicale que l'on place près des narines du patient, et après 15 à 20 inhalations nous obtenons une analgésie suffisante. Le sens de l'ouïe n'est pas aboli, et l'opérateur pourra donner certaines instructions au patient afin d'obtenir sa coopération. Le patient revient au normal aussitôt la gaze

enlevée. Il existe même certains appareils pour l'administration du trichloréthylène, qui ont été décrits en particulier par J. T. Hayward-Butt et B. A. Comb, et aussi par P. H. William.

b—comme anesthésique

Trois techniques différentes rendent utile le trichloréthylène en chirurgie dentaire comme anesthésique.

1—*Le goutte-à-goutte.* L'anesthésie goutte-à-goutte est amplement suffisante pour des anesthésies de courte durée. On évite tout danger d'anoxie. Cependant, l'induction de l'anesthésie est plus lente, si on la compare avec celle du protoxide d'azote-trichloréthylène, ou celle du protoxide d'azote seul. Et dans le cas d'une clinique où l'on passe plusieurs patients, il en résulte une perte de temps, quoique l'anesthésie elle-même ne soit pas suivie de nausées ou de vomissements.

2 et 3—*Association protoxide d'azote-trichloréthylène.* Mais c'est surtout l'association protoxide d'azote-trichloréthylène, qui rendra de grands services en chirurgie dentaire, soit par la technique habituelle du masque nasal, soit en se servant de l'anesthésie intra-trachéale. C'est dans l'association protoxide d'azote-trichloréthylène que nous pouvons mettre à profit les remarquables propriétés du trichloréthylène de diminuer et même d'abolir les réflexes pharyngés et laryngés, facilitant une barrage hermétique de la gorge, ou l'introduction d'un tube intra-trachéal. Le "breath holding", la toux, et le spasme laryngé sont des incidents plutôt rares, et nous n'avons pas de salivation excessive ou d'augmentation des sécrétions bronchiques. Dans la plupart des cas, le relâchement des masséters et des muscles du larynx est suffisant pour permettre l'intubation orale. Durant l'anesthésie, chacun sera surpris de la petite quantité de trichloréthylène nécessaire pour maintenir le patient au degré d'anesthésie voulue.

Conclusions

Nous vous avons présenté un nouvel anesthésique, le trichloréthylène. Et nous

vous avons démontré son application dans le champ de la Chirurgie dentaire.

Les rapides perfectionnements de l'anesthésie moderne ont marché de pair avec la chirurgie. De nouveaux anesthésiques et de nouvelles techniques sont mis à jour quotidiennement, à telle enseigne qu'une ré-évaluation des anciens anesthésiques et des anciennes techniques est constamment nécessaire. L'anesthésiste moderne n'emploie plus maintenant un seul anesthésique, mais plutôt une combinaison de deux anesthésiques ou plus, qui agissant de façon différente, produisent une meilleure anesthésie, moins profonde, plus rapide et plus sûre, tout en diminuant la quantité totale d'anesthésique employé. Et par ceci nous voulons dire "anesthésie balancée".

L'anesthésie moderne a acquis la maturité d'une spécialité l'anesthésiologie; et elle permet une chirurgie moderne qui était auparavant inaccessible.

BIBLIOGRAPHIE

1. Prof. D. E. Jackson. "A study of Analgesia and Anesthesia with special reference to such substances as TRICHLORETHYLENE and VINETHENE". *Anesthesia and Analgesia* 13:198 sept. 1934
2. C. L. Hewer. "TRICHLORETHYLENE as an anesthetic agent". *Brit. M. Bull.* 4:108 1946
3. G. J. C. Brittain. "TRICHLORETHYLENE as an anesthetic in Neurosurgery". *Anesthesia and Analgesia* 27: 145 1948
4. N. L. Fineberg. "New analgesic for the practice of Oto-Laryngology". *Arch. of Oto-Laryngology*. 79:2-95 déc. 1946
5. John S. Lundy. *Clinical Anesthesia*. 1942
6. G. M. Wyant. "Acute yellow atrophy of the liver after TRILENE anesthesia". *Brit. M. J.* 2:820 1945
7. K. N. Herdman. "Acute necrosis of the liver following TRILENE anesthesia". *Brit. M. J.* 2:689 1945
8. J. T. Hayward and B. A. Comb. "TRILENE analgesia. Simple apparatus for self-administration". *Lancet* 2:865 1947
9. P. H. William. "TRILENE auto-analgesia in Dentistry". *Brit. Dent. Jour.* 80: 330 1946
10. A. Barratt and S. H. B. Platts. "A short survey of TRILENE in general practice". *Brit. M. J.* 2:10 1946
11. A. L. Hyat and T. H. Gardener and J. Elam. "Safety apparatus for administration TRILENE-AIR analgesia". *Brit. M. J.* 2:27 1947
12. R. Woolmer. "Analgesia in Dentistry". *Brit. M. J.* 82:256 1947

3511, av. Girouard, Montréal

Traitement rapide de la gingivite ulcéro-membraneuse de Vincent au moyen de l'oxygène atomique

par JULES THEBAUD, D.D.S., M.Sc.D., LL.L., LL.D., (h.c.),
F.I.C.D., F.A.P.H.A., (Montréal)*

L'emploi de l'oxygène naissant, sous forme de peroxyde d'hydrogène, dans le traitement de la stomatite ulcéro-membraneuse, ou infection buccale de Vincent (Trench Mouth), ne constitue pas une innovation. L'usage de l'oxygène sous forme de gaz insufflé dans les tissus, tel que l'a recommandé Dunlop, a largement prouvé son efficacité en périodontie. Mais voulons signaler ici le fait que l'Oxygène "statu nascendi" peut être employé en thérapeutique dentaire avec un pouvoir maintenant quintuplé; nous voulons parler de "l'oxygène atomique" ou superoxol, dont l'application simple et facile permet une oxydation complète des tissus sous l'action pénétrante de milliers de bulles microscopiques d'oxygène, dont les décharges atomiques entraînent une profonde stimulation "in vivo" des cellules placées dans les zones pathologiques.

L'efficacité de cette drogue vient d'être largement démontrée par Orban. Pour comparer le pouvoir thérapeutique de l'oxygène moléculaire recommandé par Dunlop avec l'oxygène atomique produit par le superoxol, il fait agir simultanément les deux drogues sur des papilles gingivales présentant des lignes ou tâches Beltoniennes de bismuth. On sait que la ligne gris-noirâtre et indélébile dans la stomatite bismuthique est causée par une profonde imprégnation des tissus enflammés par un précipité de sulfure de bismuth, bien connu pour sa toxicité et son insolubilité.

L'application répétée du superoxol pendant 10 minutes a entraîné le blanchiment des tissus suivi de la disparition totale des

tâches de sulfure de bismuth; tandis que faisant le même test au moyen de l'oxygène insufflé, l'action oxydante n'a pas pu changer le sulfure de bismuth en sulfate blanc soluble, laissant aux tâches leur même apparence gris-noirâtre.

La supériorité marquée de cette méthode, c'est-à-dire de l'oxydation atomique sur le procédé moléculaire, nous a porté à l'employer dans les cas aigus et chroniques d'infection de Vincent et dans toutes autres affections gingivales à caractère nécrosant.

Nous ne jugeons pas à propos de réfuter ici la thèse, qui prétend que la gingivite ulcéro-membraneuse de Vincent n'est pas essentiellement une affection infectueuse locale, étant paraît-il, d'après certains auteurs, déterminée par une avitaminose C doublée de débilité générale. Nous adoptons de préférence l'opinion de ceux-là qui la considère comme une stomatite infectueuse et spécifique, dont l'évolution est parfois favorisée par un affaiblissement de l'organisme.

Nous sommes de l'avis de ceux qui croient à une association symbiotique des bacilles fusiformes et des spirochètes. Hampp est arrivé à différencier deux types de fusiformes: un petit, le fusobactérium polymorphum, et un autre plus développé, le fusiforme dentium; et, tout dernièrement, on a découvert l'action combinée, mais occasionnelle, d'un streptocoque anaérobie. Dans cette symbiose, il semble même qu'il existe une stratégie au cours de laquelle les fusiformes pénètrent en deuxième lieu, après les spirochètes, dans les tissus pour produire leur action digestive et nécrosante.

*Section des recherches en Périodontie: Faculté de Chirurgie Dentaire Université de Montréal

Nous avons constamment à l'esprit toute la série des drogues spirochéticidiques et oxydantes ayant une action spécifique contre les anaérobies précités. Pour ne citer que quelques-unes de ces drogues qui ont fait leur preuve, soit en minimisant l'action nocive de ces bactéries, soit en les détruisant, nous pourrions ébaucher une liste presque interminable, qui commencerait par le nom de ces médicaments: solution de Lugol, solution de Fowler, néoarsphénanime, ricinoléate de sodium, peroxyde d'hydrogène, perborate de sodium, nitrate d'argent, sulfate de cuivre, iode de Talbot, bleu de méthylène, teinture de métaphène, violet de gentiane, acriflavine, merthiolate, les sulfamidés, la pénicilline, etc., etc.

Mais le superoxol, ou oxygène atomique, qui a donné ses preuves dans l'expérience de Orban, donne un rendement insurpassable dans la médication que nous cherchons à employer contre les anaérobies. A l'appui de notre assertion, voici quelques observations cliniques recueillies dans deux cas typiques de gingivite ulcéro-membraneuse bien caractérisée, dans lesquelles les spirochètes et les fusiformes se trouvaient en grande quantité:

Cas No 1—Mme. S—, souffrait d'une stomatite ulcéro-membraneuse avec cratères accusés aux papilles et ulcérations marquées de la gencive du côté palatin des dents supéro-antérieures, avec gêne à la

mastication et hémorragies spontanées: (Fig. 1 et 2). Comme réflexes généraux: migraine et température variant entre 101° et 102°. L'analyse du laboratoire révéla la présence de nombreuses colonies de fusiformes et de spirilles de Vincent.

Traitement—application de mèches au superoxol, toutes les 24 heures, pendant les 4 premiers jours, et toutes les 48 heures, pendant les 6 jours suivants, au total 7 séances à la chaise. (Fig. 3). Comme adjuvant, un détartrage a été fait à la 3ème séance, suivi de fréquents lavages au peroxyde. Les tablettes de pénicilline n'ont pas été recommandées, comme dans d'autres cas, afin de ne pas confondre les résultats thérapeutiques des deux médicaments.

Résultat: amélioration très marquée, dès la deuxième application du superoxol. A la 3ème application, disparition totale des réflexes généraux et meilleur aspect des gencives qui reprirent leur teinte et leur tonalité normales, graduellement, jusqu'à la fin du traitement. (figure 4).

Contrôle: 10 jours après le traitement, un frottis examiné au laboratoire ne signala surtout que la présence de streptos et de staphylos.

Cas No 2—M. H—, présentait une infection de Vincent, généralisée à tous les bourrelets gingivaux, particulièrement dans la région antérieure (figure 5).



Fig. 1.—Cas 1, avant le traitement.



Fig. 2.—Cas 1, avant le traitement.



Fig. 3.—Cas 1, pendant le traitement.

Le médecin du patient pense à une certaine débilité générale et peut-être aussi une avitaminose C et B3 chez son patient, tandis que le laboratoire confirme la présence d'innombrables spirilles et fusiformes. Le malade accuse des accès de fièvre, une mastication difficile, des larmoiements et une hypersalivation.



Fig. 4.—Cas 1, après le traitement.

Médication—Identique à celle suivie dans le 1er cas. Cependant, devant la lenteur des tissus à se régénérer, il a été nécessaire de prolonger à 5, la 2ème série des séances à intervalles de 48 heures, to-

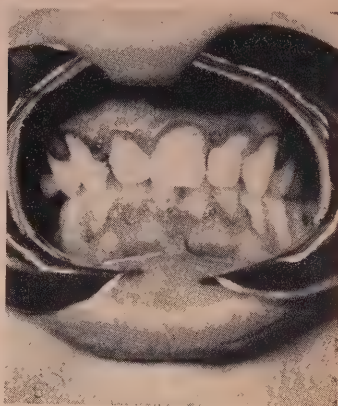


Fig. 5.—Cas 2, avant le traitement.

talisant ainsi le nombre des traitements à 9.

Résultats: La tonification du malade par le médecin a sûrement créé un mieux-être qui n'a pas été instantané, tandis que l'oxydation des foyers infectés au moyen du superoxol a fait son effet dès la 3ème application. (figures 6 et 7).

Mode d'emploi: Le superoxol, étant reconnu comme médicament à réaction acide, il convient au préalable d'en réduire l'acidité au moyen d'une solution de bicarbonate de soude.

Les phases suivantes sont de règle:

- 1.—Anesthésier légèrement la gencive au moyen d'un anesthésique de surface, comme la nupercaine.
- 2.—Attendre une dizaine de minutes avant de procéder à l'application du médicament.
- 3.—Éliminer la salive au moyen de bourrelets de coton ou de gaze.
- 4.—Appliquer le superoxol au moyen de mèches ou de fines boulettes de coton, qu'on aura soin d'introduire sous la gencive en appliquant une certaine pression.
- 5.—Laisser les mèches en place pendant deux ou 3 minutes, jusqu'à ce que l'on obtienne le blanchiment total ou partiel des papilles.
- 6.—Inviter le patient à se rincer la bouche afin d'hydrater les tissus à nouveau.



Fig. 6.—Cas 2, application du superoxol.

Le blanchiment des tissus étant causé par l'introduction d'une infinité de bulles d'oxygène, entre les cellules in-vivo, et les autres éléments qui composent les tissus, tels les capillaires et filets nerveux, il en résulte nécessairement une forte compression qui produit une ischémie, d'où la sensation de picotement ou de brûlure, que ressent le patient. Le médicament n'étant nullement toxique, il n'est susceptible de produire aucune escharre ou desquamation; cependant, là, où l'examen révèle des caries de collet ou de l'érosion, il est préférable de les protéger au moyen de ciment ou de "cavity-lining", car les décharges atomiques d'oxygène rendent la dentine et même la pulpe excessivement sensibles pendant quelques minutes.



Fig. 7.—Cas 2, après le traitement.

Conclusions: A première vue, le procédé par oxydation directe peut paraître drastique, mais son efficacité est si rapide et son mode d'emploi si simple, qu'il est facile à n'importe quel praticien d'en tenter l'usage. Il entraîne l'élimination et la destruction des germes d'une façon complète par son pouvoir oxydant et facilite la stimulation des tissus par compression, et par "chahutement" discret des éléments, qui les composent. D'ailleurs, en périodontie, son emploi est d'un usage courant pour la désinfection des clapiers avant les interventions et pour hâter la guérison des tissus après le curetage subgingival et aussi après l'électro-coagulation des papilles interdentaires.

270 av. Outremont.



Dans le monde dentaire

Réunion de la Société Dentaire du Saguenay

Le 16 octobre, à Roberval, avait lieu le Congrès Régional de Roberval, sous les auspices de la Société Dentaire du Saguenay et de la Société Odontologique Canadienne.

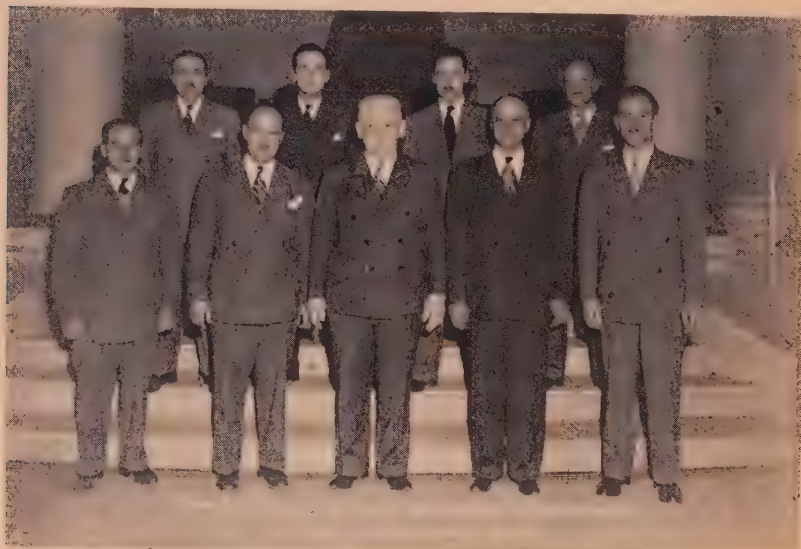
Le programme de la journée comprenait les items suivants: 10.00 hrs a.m.—Rendez-vous à l'Hôtel-Dieu, St-Michel de Roberval; 10.30 hrs—"Conservation de notre capital-santé", conférence par le docteur Conrad Godin, Trois-Rivières; 11.30—Film; 12.30 hrs p.m.—Dîner à l'Hôtel Maison Blanche; 2.30 hrs—"Extractions chirurgicales", conférence par le docteur Gérard de Montigny, Montréal; 4.30 hrs—Election du nouvel exécutif pour 1948-

49; 6.30 hrs—Banquet pour les membres et leurs épouses.

Nouveaux honoraires de la Commission des Accidents du Travail

Après de fructueux pourparlers avec le Ministère du Travail du Gouvernement provincial, le Collège des Chirurgiens-Dentistes de la Province de Québec vient de faire modifier la liste des honoraires dentaires de la Commission des Accidents du Travail pour les accidentés.

Cette revision touche les honoraires, qui dataient de 1931. Le Collège fera parvenir sous peu aux membres cette nouvelle liste, qui s'apparente quelque peu à celle du Département des Affaires des Vétérans du Dominion du Canada.



le docteur Rudolph Schlosser à la Société Dentaire de Montréal

Le docteur R. O. Schlosser, professeur de prothèse complète à l'Université Northwestern, de Chicago, auteur et conférencier distingué, était la conférencier d'octobre de la Société Dentaire de Montréal.

Lors de son passage à Montréal, le docteur Schlosser a tenu à rencontrer des anciens élèves de l'Université Northwestern, dont quelques-uns sont "maîtres des sciences dentaires" de cette institution.

Dans le groupe, nous remarquons, première rangée, de g. à d.: René Sarrazin, Gérard de Montigny, Rudolph O. Schlosser, de Chicago, Conrad Archambault, Jacques Lalonde.

Deuxième rangée, de g. à d.: Victorien Dubé, Jean Nadeau, Guy Benoit, Maurice Beaudry.



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397 est Boul. S.-Joseph, Montréal

Fin d'année, début d'une autre

L'année 1948 s'achève . . .

A l'aurore d'une nouvelle année, il est d'usage—coutume excellente, s'il en est une—d'offrir des souhaits et de reconnaître en paroles, sinon en acte, les bienfaits, dont on a été l'objet durant les douze mois écoulés.

Nous offrons à nos lecteurs et confrères de langue française de l'Association Dentaire Canadienne et à nos amis anglais, qui nous lisent plus volontiers qu'on ne le croit en certains milieux, nos vœux de bonheur, de prospérité et de santé.

Nous remercions tous les collaborateurs, qui nous ont fait parvenir leurs écrits scientifiques et des nouvelles d'intérêt professionnel. La section française de notre Journal est en excellente santé; la matière est abondante, la sympathie, qu'on a pour elle, fait du bien au rédacteur et les dentistes canadiens-français sont en voie, par leurs publications, de se créer un renom favorable à l'étranger.

Nous souhaitons à nos confrères de langue anglaise de nous continuer leur compréhension et leur preuve de bonne volonté. Plusieurs nous ont manifesté leur regret de ne pouvoir lire notre partie du Journal; nombreux sont ceux, qui, nous ayant connu à Murray Bay, cet été, ou ayant fréquenté les cours post-scolaires de notre Université, ont senti se développer, chez eux, une grande admiration et un attachement pour les Canadiens-français. Nous espérons des contacts de plus en plus fréquents, pour que se raffermisse l'unité canadienne, au moins dans notre domaine professionnel.

Nous remercions nos voisins des Etats-Unis pour l'effort gigantesque, qu'ils accomplissent dans les recherches dentaires et pour leur générosité à en faire profiter la profession du monde entier. Tous les dentistes de l'univers bénéficient de leur organisation admirable et des facilités, que leur procurent leur grand nombre et la richesse de leur pays. A nos confrères d'Europe—et spécialement à ceux de langue française—, qui nous ont porté beaucoup d'intérêt, cette année, nous offrons nos vœux de courage et de redressement matériel prompt et stable. Nous connaissons les tribulations, qu'ils ont rencontrées, depuis 1939, et nous admirons leur tenacité et leur valeur.

Pour tous, professeurs, chercheurs, praticiens, organisateurs, techniciens, assistantes, pour tous ceux, enfin, qui forment la grande famille dentaire, que cette nouvelle année soit heureuse!

GERARD DE MONTIGNY.

Université de Montréal *Faculté de Chirurgie Dentaire*

COURS POST-SCOLAIRES

Plus bas, apparait une liste des cours post-scolaires, qui seront donnés à la faculté de Chirurgie Dentaire de l'Université de Montréal, durant l'année 1949.

En plus des cours déjà offerts à la profession, il est à noter que deux nouvelles matières ont été mises au programme: diagnostic et pédodontie.

Pour les inscriptions et les renseignements supplémentaires, on s'adresse au Doyen, 2990 Boul. Mont-Royal, Montréal.

ENDODONTIE	du 17 au 22 janvier 1949.
PEDODONTIE	les 25, 26, 27 et 28 janvier 1949.
CHIRURGIE	les 7, 8, 10, 15, 16, 17 février 1949.
DIAGNOSTIC	les 8, 15, 22 février et le 1er mars 1949.
PROTHESE	du 7 au 12 février 1949.
ENDODONTIE	les 22 février, 1er et 8 mars 1949.
PROTHESE	du 21 février au 5 mars 1949.
CHIRURGIE	les 7, 8, 10, 15, 16 et 17 mars 1949.
DIAGNOSTIC	du 14 au 19 mars 1949.
ORTHODONTIE	du 7 au 19 mars 1949.
PEDODONTIE	les 29, 30, 31 mars et le 1er avril 1949.
ENDODONTIE	les 5, 12 et 19 avril 1949.
PROTHESE	du 4 au 9 avril 1949.
ORTHODONTIE	du 11 au 23 avril 1949.
PROTHESE	du 11 au 23 avril 1949.
CHIRURGIE	du 18 au 23 avril 1949.
ENDODONTIE	du 2 au 7 mai 1949.
ORTHODONTIE	du 23 au 28 mai 1949.

Cours post-scolaire en prothèse, à l'Université de Montréal du 17 au 22 janvier 1949

Un cours de perfectionnement en prothèse est offert aux dentistes de pratique générale par la faculté de Chirurgie Dentaire de l'Université de Montréal, du 17 au 22 janvier 1949 (une semaine complète).



M. le docteur Rudolph O. Schlosser

Ce cours comprendra des conférences et des démonstrations cliniques et de laboratoire, couvrant les différentes phases de la prothèse dentaire complète, allant de l'histoire de cas jusqu'à l'insertion des pièces complètes et leur corrections subséquentes, en passant par la prise d'empreintes et l'enregistrement articulaire.

Ce cours sera sous la direction du docteur Rudolph O. Schlosser, professeur émérite de prothèse à l'Université Northwestern, de Chicago.

Clinicien et conférencier invité dans le monde entier (Etats-Unis, Allemagne, France, Haiti, Suède, Canada), le docteur Schlosser est l'auteur du volume "Complete Denture Prosthesis", qui vient d'avoir sa deuxième édition.

Récemment, le docteur Schlosser a organisé des cours de perfectionnement dans les Etats américains de

l'Utah, Montana et Wyoming, et lors de la célébration du 50e anniversaire de la Société Dentaire de Los Angeles.

Le docteur Schlosser est considéré, à juste titre, comme un des grands maîtres de l'heure de la prothèse dentaire.

Les inscriptions sont limitées à 30.

Les frais du cours sont \$60.00

Les demandes d'inscriptions, accompagnées d'un chèque fait à l'ordre de l'Université de Montréal, devront être adressées à:

M. LE DOYEN—Faculté de Chirurgie Dentaire,
Université de Montréal 2900 boul. Mont-Royal Montréal.

Valeur d'un examen complet de la bouche par le dentiste

Selon le Dr Harold G. Ray, de l'Université Northwestern, le dentiste devrait parfois oublier les dents pour examiner les tissus voisins des dents. Dans sa recherche des cavités sur les dents, le dentiste peut ne pas apercevoir des lésions importantes (comme des signes précoces de syphilis), que le patient a droit de connaître.

Pour encourager ces recherches, le Dr Ray a réuni, récemment, cinquante-six dentistes pour un cours de médecine dentaire à Baileys Harbor, Wisconsin, dans le but d'oublier parfois les dents pour regarder plus loin. Le docteur Ray est d'avis que la plupart des dentistes pensent—à tort—que les patients, qu'ils examinent, ont la cavité buccale en bonne condition, parce que leur dents sont saines. La bouche est tapissée d'une muqueuse délicate, qui laisse paraître souvent des affections, dont les causes sont dans l'organisme. Si le dentiste a l'oeil ouvert, il peut déceler la syphilis, la leucémie, la maladie d'Addison et plusieurs autres troubles. Le dentiste est ainsi en posture de référer son patient à un médecin, avant que la maladie ne soit trop avancée.

Nouvelle direction au Collège des Chirurgiens-Dentistes de la Province de Québec

Nouveaux gouverneurs élus au Collège

Les élections du Collège des Chirurgiens-Dentistes de la province de Québec, tenues durant le mois d'octobre, ont donné les résultats suivants:

Montréal-est:

Dr C. Archambault; Dr J. R. Brossard; Dr H. Brouillet; Dr V. Dubé; Dr G. Dupras; Dr J. A. Fortier; Dr J. P. Lachapelle; Dr R. Poupert; Dr A. Surprenant; Dr E. Vinet.

Montréal-ouest:

Dr G. G. Armitage; Dr J. K. Carver; Dr W. E. Charland; Dr M. L. Donigan; Dr C. I. Finklestein; Dr L. E. Kent; Dr O. A. Lefebvre; Dr N. Solomon.

Québec:

Dr L. P. Goulet; Dr D. V. Plamondon; Dr G. Ratté; Dr D. Roy.

Trois-Rivières:

Dr C. Godin; Dr R. Trudel.

St-François:

Dr R. Laurence; Dr V. H. Olivier.

Université de Montréal:

Dr E. Charron; Dr P. Geoffrion.

Université McGill

Dr D. P. Mowry; Dr A. G. Racey.

Société Dentaire de Montréal, Inc.:

Dr J. Demers.

Société Dentaire des Trois-Rivières Enrg.:

Dr M. Lafontaine.

Société de Stomatologie de Québec:

Dr R. Langlois.

Montreal Dental Club:

Dr J. W. Abraham.

Mount Royal Dental Society:

Dr M. Goldenberg.

Registraire:

Dr Denis Forest.

On se souvient que ces nouveaux gouverneurs sont élus pour un terme de quatre ans, à la suite de l'amendement de la charte du Collège, qui fut fait à la dernière législature provinciale.

Constitutives du Collège:

A leur première assemblée, tenue en novembre, les gouverneurs ont procédé aux nominations suivantes:

Comité Exécutif:

Président: Ephrem Vinet; Vice-présidents: J. K. Carver et Viger Plamondon; Régistraire: Denis Forest; Président sortant de charge: Albert Surprenant; Conseillers: Roméo Poupert, G. G. Armitage, Conrad Archambault, Gustave Ratté, Armand Fortier, M. L. Donigan, Victorien Dubé.

Conseil de discipline:

Conrad Archambault, prés., G. G. Armitage, Armand Fortier.

Comité de Consultation:

Ernest Charron, D. P. Mowry.

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